HOME COMPUTING WEEKLY
AN ARGUS SPECIALIST PUBLICATION
October 1–7 1985 No. 132 55p

88

Automated Action! In our Milton Bradley ROBOTIX competition

Fun in

Walt Disney
DONALD DUCK'S PLAYGROUND
COMMODORE 64/128
Designed by Al Lowe and the Walt Disney Personal Computer Software Staff

First release from Kids! premiered inside plus six pages of reviews

in depth — Level 9's Red Moon

Commodore's Package deal

Commodore have announced details of six bundles aimed at the Christmas market which will be available from October 1st and include packages for C128, C64, and Plus/4

- The C64 will be available complete with 1530 cassette recorder and three pieces of software, The Secret Diary of Adrian Mole, Designers Pencil (Activision) and the Music Maker pack complete with overlay keyboard. Also included is a copy of the paperback, The Growing Pains of Adrian Mole. The price of the complete package is £199 99 and Commodore's marketing manager, Chris Kaday said, "You can play music, draw pictures and play games, it's designed to keep the whole family amused until well into the new year"
- A second C64 package features the computer a 1541 disc drive and two games, Super Xaxxon and Exodus Ultima III, both from US Gold. The bundle will retail at £299 99
- A special peripheral package containing the 1541 disc drive and a dot matrix printer for £199 99 will also be available "It gives the C64 owner the chance to upgrade his machine at a substantial saving," said Chris Kaday
- The C128 has its own package along with a 1570 disc drive at a cost of £449
- 100,000 Plus 4's are to be sold through Lasky's, Greens, Woolworths and Comet as part of a £99 99 package. The pack contains a Plus/4 micro, 1531 cassette deck, joystick and a 10 pack of software
- A business pack based on the Plus/4 comprising disc drive, printer and business software will retail at £299 99

Limited numbers of the C128 are expected to be available sometime in October Chris Kaday said there had been teething problems on the production line but these had been "ironed out" The current recommended retail price of the C64 is £229 and the stand alone price of the 128 is set at £269 "Our bundling strategy is aimed at giving excellent value for money and with our C64 compendium we are trying to show that computers can be used for more than just games," commented Chris Kaday

Commodore plus4: One of a trio for Xmas

Spanish Spectrum 128

The Spanish version of the Spectrum 128 has been officially unveiled at a Barcelone Computer Show but there are on plans to market a British version until Spring 1986.

Spanish 128 are being built by Investronica and was put on show at the Sonimag Exhibition

Explaining Sinclair's decision to tackle the Spanish market before introducing the 128 at home, Charles Cotton director of sales and marketing for Sinclair Research said, "It is because of the particular market forces in operation there Spectrum accounts for half the home computer sales in Spain"

The launch of the 128 follows the debut of the QL in Spain in April

Mr Cotton continued, "We may introduce a UK version in the Spring of 1986."

"Current sales show that the 48K Spectrum and 128K QL have never been more popular than they are now"

"The Spectrum Plus is pounding the opposition here by a factor of two to one and the QL is now selling in record numbers at its new price of £199 99"

"We are confident we have the products the public wants this Christmas. A 128K Spectrum doesn't fit into the UK picture just now".

oogie on down — Seil's Sound Buggy p.34

Super-Amstrad ROMs under review p.16

Climb McGraw Hill's Ladders to Learning p.20

Interference free programming for the Amstrad p.32

Code for the Commodore New series p.22

MIRRORSOFT

FOLLOW HALLEY'S COMET…AND MUCH MORE WITH

MIRRORSOFT
STAR SEEKER
A guide to the night sky by Paul Phillips, PhD, FRAS

- Construct and print out star and solar system maps from any point on Earth at any time and date over several centuries
- Call up a mass of information on a particular star, constellation, or planet
- Follow the relative positions of the stars and orbital motions of the planets in the Solar System
- Plot the path of Halley's Comet as it crosses our skies this winter on its once-in-a-lifetime visit
- Predict the orbit, phase, and age of the Moon

NOW WITH SPECIAL EXTRA BOOKLET ON
HALLEY'S COMET!

Published in association with the London Planetarium, Star Seeker and its companion program, Solar System, gives you all this and much, much more. The comprehensive manual provides background information, latitude and longitude tables, extensive hints for using the programs, and complete lists of the stars and constellations featured.

Price £9.95 Available for Commodore 64/BBC/Electron, Spectrum 48K, MSX. Disk versions also available for Commodore 64 and BBC versions at £12.95.

MIRRORSOFT

Maxwell House, 74 Worship Street, London EC2A 2EN Tel: 01-377 4644
Trade orders to: Purnell Book Centre, Paulton, Bristol BS18 5LQ

HOME COMPUTING WEEKLY

Editor Dave Carlos
Assistant Editor Bryan Ralph
Editorial Assistant Kerry Fowler
Group Editor Wendy Palmer
Design Tony Keep
Production Assistant Lyn Collis
Ad Manager Dominic Forlizzi
Classified Advertising David Horne
Publishing Director Peter Welham

October 1-October 7, 1985 No. 132

Soapbox

In HCW's soapbox M A W decried the use of violence in computer games. Whilst I might expect to find this sort of argument in "The Guardian," in a weekly computer magazine it seems unnecessarily moralistic if not totally superfluous.

It is certainly true that a great number of games involve zapping the enemy off the screen, be it in a land battle or in outer-space. However, what M A W. fails to realise is that these are simply little blobs on a screen which have to be removed in order to reach an objective.

This is surely less harmful and in fact positively instructive compared to boy's war-comics and indeed the nature of most children's playground games. It has yet to be proven that TV violence has a subversive effect that results in copy-cat behaviour, so it seems extremely unlikely that making a few indistinguishable shapes disappear from a screen is going to turn our children into a nation of aggressive street fighters.

Computer games are first and foremost entertainment and anyone who thinks that simply because we might come away from seeing a musical humming the tunes that we're equally likely to shoot the neighbours after playing a zap em game, must have a very poor opinion of the human species. **N.D.**

SPECIAL FEATURES

Spotting the swots —
Ladders to learning 20
Ventures galore from Peter Sweeney 20
Sell's Sounds Buggy — feel the beat 34

AMSTRAD

Game for a graph — utility 27
Don't interrupt — programming tips 32

BBC

Bumper Dumper 18

COMMODORE

ABC shuffle — game 24

PERIPHERALS

Super ROMs reviewed 16

REGULARS

News 4
Releases — the round-up........ 6
Reviews 5
Competition — Robotix mania 14
Your letters 35
Ron Complex —
the eigth wonder of the world? 34
Classified 37
Readers page 38

Ron reviews ROMs?

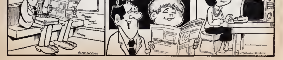
Coming soon...
- Spectrum Tool Box utility series
- Reviews of Acorn Graphics Extension ROM and Kempstons Spectrum disc interface
- Commodore machine code part 2

Argus Specialist Publications Ltd
No 1 Golden Square, London W1R 3AB 01-437 0626

Home Computing Weekly is published on Tuesdays. Subscriptions and back issues: Infonet Ltd, 10-13 Times House, 179 Marlowes, Hemel Hempstead, Herts HP1 1BB 0442 48432. Trade distribution: Argus Press Sales and Distribution Ltd, 12-14 Paul Street, London EC2A 4JS 01-247 8233. Printed by Alabaster Passmore & Sons Ltd, of London and Maidstone, Kent. Design and origination: Argus Design Ltd, Circus House, 26 Little Portland Street, London W1N 5AF

BASIC LIVING

JIM BARKER • JON WEDGE


JANE STARTED PROGRAMMING THE HOME COMPUTER THIS MORNING
I EXPECT I'LL HAVE TO EXPLAIN "LET A=B" WHEN I GET HOME!
I WONDER WHY GEORGE HAS SO MUCH TROUBLE WITH NESTED FOR/NEXT LOOPS!
SEEMS SIMPLE TO ME...

Osprey winners

All the hawk-eyed participants of Bourne Educational's Osprey competition can now release your talons from those poor defenceless armchairs because the results are out!

The 10 lucky prize-winners hatched from our competition incubator (it's at times like this that all the worst puns come home to nest) will all be receiving bumper eight packs of Bourne's educational range — including of course Osprey!, a conservational game that has you as protector of that magnificent bird of prey

There were five differences between the two pictures of the Osprey doing his bit to keep the natural cycle going as he scooped up a salmon from a babbling brook — oh, what it is to wax lyrical!

The observant bird-spotting winners are as follows D Richards, London N4, M Owen, Caernarfon, M Tricksey, Poole, R Couchman, St Ives, P Collins, Urmston, J Lester, Nutsford, R Stacey, Killamarsh, W Caldwell, Lenzie, B Morris, Rochdale, H Lagusz Grimsby

Valunteers wonted

The Royal National Institute for the Blind's Student Tape Library desperately requires volunteer readers to record books on computer science

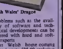
The library which is based in Islington is used by over a thousand blind people who need material recorded quickly for study and professional purposes

Using their own recording equipment and compiling the tapes at home the readers supply an invaluable service Anyone with a few hours to spare and a clear reading voice who is familiar with computer textbook writing can offer their skills to the RNIB

Student Tape Library RNIB, Braille Hse, 338/346 Goswell Rd London EC1V 7JE

Wales and Dragons

Dragons, it seems have a lot in common with pigeons in that they eventually return home to roost A special Dragon-users weekend is to be held at the Cain Valley Hotel, Llanfyllin from 25-27th October and will give all Dragonites the chance to meet up and try out some new machines



Welsh Wales' Dragon

Problems such as the availability of software and technological developments can be discussed with hard and software experts

This Welsh home coming weekend costs £35 00 inclusive and should creat a few sparks as well as giving you the chance to meet a few old flames

Wales Tourist Board, Brunel Hse, 2 Fitzalan Rd, Cardiff CF2 1UY

Hi-Tech Postie

There's good news for secondary schools who are using the Times Network Systems electronic mailbox facilities — you can now acquire an additional unit for £34 a year.

New subscribers to the scheme, which is aimed primarily at communication between headteachers and various education authorities, can also take advantage of the offer providing they join before December (the initial fee is £69 per term and only one extra mailbox will be available to each subscriber)

Based on the Telecom Gold system, TTNS is now used by over a 1000 schools and all local educational authorities. The system includes colour viewdata screens and high-speed transfer of software with error correction.

The Times Network System, PO Box 7, 200 Grays Inn Rd, London WC1X 8EZ.

At home . . .

British Telecom's Home Computer Line is now accessible to Northern Irish users who want to keep up with latest news and views of the computer world.

The news service is a three minute bulletin on hard and software, current and general news. Home Computer Line was pioneered a year ago in Bradford and it's hoped that it will be shortly available as a local service in most parts of the country.

Home Computer Line, Belfast (0232) 8085; Bradford (0272) 722622

and abroad

The independent user group for Amstrad programmers, Amateur Programmers Exchange, has now gone international.

A P E X, a bi-monthly newsletter through which people can make contacts and exchange programming ideas, was restricted to U K. membership — but such were the demands from foreign climes that it has now broadened its horizons.

So now Amstrad lovers from Timbuctoo to Teddington will be able to improve their skills and maybe even arrange some exchange visits (Teddington in the Spring is said to be a real marvel). S A E 's and two International Reply Coupons to Nick Godwin, 4 Hurkur Cres, Eyemouth, Berwicks, TD14 5AP.

Dealer of the year

In the style of the old "Your favourite milkman award" Home Computing Weekly are running a dealer of the year competition sponsored by Mirrorsoft.

We shall be looking forward to hearing why your dealer should win one of the 10 deluxe prizes (1st prize — a £500 holiday voucher — well they do work hard to keep you satisfied) — whether he's been particularly useful to you or perhaps helped out with local charities or community schemes. Whatever the reason we'll be waiting with bated breath.

The competition will be announced in HCW later in October, so start thinking now — does your dealer really deserve a holiday in the sun?

Sorry, I'll read that again . . .

Since going to press (HCW 131) some of the details in our "Blockbusters bargain bundle" Ocean story have been altered. The "They Sold a Million" compilation will now comprise Beach Head (US Gold), Daley Thomson's Decathlon (Ocean), Jet Set Willy (Software Projects), and Sabrewulf (Ultimate) — not Atic-Atac as originally planned. Also the package will now be marketed under the name of "Hitsquad" and not "Hitsville".

These last minute changes were due to Ocean wishing to create an even more powerful package.

Edventures

Macmillan Software are breaking out of the Edsoft mould with a new series called the Professional Touch. The first three titles in the series are World Cup Soccer, Magic and Screenplay. The book and software packs are aimed at those home users who demand more from their software than a maximum body count of vaporised aliens but who alternatively don't want to sit down at their micro to study for a degree in molecular physics.

Screenplay is a guide to creating your own TV programmes. The book gives you the tricks used on TV and film production techniques and the software gives you the opportunity to put those techniques into practice. Characters can be designed and animated and dialogue, scenery, sound effects and soundtrack can be added to produce your own program. Using video you can transform your program into a programme.

World Cup Soccer (the book) is introduced by former England goalkeeper Ray Clemence and contains many inside [illegible] The cards World Cup Soccer (the software) is made up of two programs — World Cup Manager in which you have to steer your international team to the World Cup final and World Cup Fact file which puts at your fingertips the details of every world cup match ever played. A soccer quiz is also featured.

Amateur magicians in search of new tricks will be shown in Magic. The book contains finds on the art of illusion and a collection of simple [illegible]. On the program are an additional 15 tricks which can be sequenced together to give a magic show on your home micro.

Macmillan Marketing Director Martin Neild said the packs were aimed at combining all the fun and excitement of computer games with the mental challenge and thought provoking use of home computers. World Cup Soccer, Magic and Screenplay cost £9.95 and are available for the Spectrum, Commodore and Amstrad.

Macmillan Software, 4 Little Essex Street, London WC2

WORLD CUP SOCCER
WORLD CUP SOCCER
MAGIC
SCREENPLAY
SCREENPLAY

RELEASES

New, newer, newest — the releases to watch in this weeks round-up

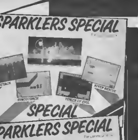
Bits and Pieces

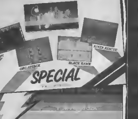
Sports simulations have become a fixture in the software charts and there are more on the way

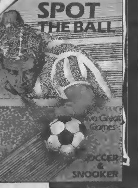
- Creative Sparks are putting two simulations on one tape with **Spot the Ball** featuring Soccer on one side and snooker on the other The cassette for the Atari costs £9 95
- Soccer will also be on the BBC (the micro that is) now that Ocean are set to release **Match Day,** a football simulation that can be played with the keyboard or joystick Match Day will retail at £9 95
- **Frank Bruno's Boxing** is being converted for the C64 and will cost £7 95 and £11 95 for the disc version
- Among the titles being converted to the Amstrad by New Generation Software is **Jonah Barrington Squash** which will be available early in October Also heading for the Amstrad are **Trashman** and **Travel with Trashman** due for release on 23rd of October and 13th of November respectively New Generation will also release a new C64 game called **Magica** on 4th of December Written by Geoff Sumner it will be a fantasy graphical adventure featuring an elfin hero in pursuit of magical powers

A third title in the Trashman series will be released in January next year for the Spectrum and Amstrad called **Trashman Goes Moonlighting** in which Trashman undertakes a number of black economy occupations to make ends meet

- Two compilations on the Sparklers budget label have been released Each compilation comprises four games and costs £7 50 The Spectrum package comprises, **Orc Attack, Stagecoach, Tower of Evil** and **River Rescue** On the C64 bundle can be found, **Slurpy, Black Hawk, River Rescue** and **Orc Attack**
- **Super Scramble** has been re-released at a budget price by Mushroom Software, the C64 game formerly £6 50 now retails for £1 99
- **Yes Minister**, which was to have been released by Mosaic Software in November as stated in last weeks HCW is now to be released in March 1986 to coincide with the new TV series
- Mirrorsoft's **Boulderdash** reviewed in last weeks HCW is available with an Amstrad version on one side of the cassette and an Atari version on the other, price £9 95







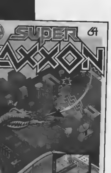
RELEASES

Golden Duck

Donald Duck's Playground will be the first release in the new Kids! range from US Gold. Donald, along with Huey, Dewey and Louie, his mischevious nephews, want to raise money to build a playground. The program is designed to give children an early grasp of the idea of money. Donald tackles a variety of jobs — from sorting cargo for Mcduck Airlines to operating the junctions on Amquack Railways and the whole package is designed to be both entertaining and educational for children of all ages. Donald Duck's playground will be available for C64/128 at the beginning of October price £9 95 and £14.95. The second in the Kids' series will be **The Kermit Electronic Story Maker** due out at the end of October at the same prices

US Gold's **Super Zaxxon**, the follow up to Zaxxon will be available on October 11th for the Atari and C64. It will retail at £9 95 and £14 95 for the disc version.

As pilot of your starfighter twisting through peril fraught tunnels and cities your aim is to find and destroy a race of deadly firebreathing dragons.



ASTRO
THE 3D INTERACTIVE ARCADE ADVENTURE ON SPECTRUM
HEWSON CONSULTANTS

Send in the Clones

Astro-Clone, the latest adventure game from Hewson consultants is due for release on the Spectrum on October 10th price £7 95 Promising a combination of "strategy, shoot em up and adventure elements" Astro-Clone is set in a futuristic world where robotic clones battle with "Seiddab" warriors

Advanced animation has been used which allows the robotic clones to carry out consecutive movements such as reaching for a weapon, turning and firing in one sequence. The author Steve Turner, who also wrote Avalon, said, "This is the most complete adventure movie I've done to date with three themes meshing within the overall scenario. It's more like a film than an arcade game."

INTERCEPTOR SOFTWARE
MEGGA
BREAK FEVER
CAVERNS
SUITABLE FOR THE commodore 64

Interceptor six-pock

The compilation craze continues apace and gives you the opportunity to sample such diverse delights as break dancing, war gaming, circus acts and eastern adventures now that Interceptor have brought out their **Megga-Compilation**. The package contains **Arabian Nights, Big Top Barney, Where's My Bones?, Break Fever, Caverns of Sillahc** and **Frontline**. The package for the C64 costs £7 95

Interceptor have also released **Fig Forth** for the Amstrad. Forth is a computer language which in this version contains over 340 key words and has been specially designed to use the facilities of the Amstrad. Features on the Fig Forth program include full screen editor, Forth based assembled RAM based virtual memory system, colour text graphic commands, user defined characters and joystick compatibility. The software comes with a 56 page manual and retails for £9 99

Edsoft deluge

Limerick based Edsoft company, School Software, are bringing out no less than 17 releases this month. The list does not include an improve your memory program which might help you to memorise the following titles, **Better Maths, Better Spelling, Physics 1, Biology 1, Biology 2, Chemistry 1 and 2, Physical Geography, Mapwork, Social and Economic Geography, Weather/Climate, Ordnance Survey/Earth, French, Early Reading, Musical Invaders** and **Better Irish 1 and 2.** I hope you can remember them all because there will be a test later. Many of the title are available on both disc and cassette for C64 and BBC and cassette only for the Amstrad. Prices vary but as an indication, Better Spelling, available for all three machines costs £7.95 and £10 95 on disc.

Donald Duck's Playground

Walt Disney Productions have a reputation for high quality products and this first foray into the world of computer software will not upset this reputation one iota The graphics are produced to as high a standard as one might expect from the kings of cartoons, and the game concept combines education and fun in a highly professional way

Huey, Dewey and Louie want Uncle Donald to build them a playground but a project like this needs financing and first the money must be earned

In Donald Duck's town the main street has three shops on one side and four work places on the other. Jobs can be undertaken in any order and as many times as the child wishes The jobs involved are, loading luggage into the correct trailer by matching the three letter destination tags at McDuck Airlines, controlling the points on the Amquack Railway so that a train can reach as many destinations as possible in the time allotted, placing toys on the correct shelves in the toy shop, catching fruits and vegetables in the produce market and storing them in the correct boxes

Each job tests a different skill The railway game is a test of logic, the airline tests letter recognition, shape and pattern matching is tested in the toy shop, and hand-to eye co-ordination in the produce market On entering any of these buildings the child must first choose how long the job will last and this can be up to eight minutes duration

After each stage comes payday when the money earned is distributed in notes and coin to the correct piles and the savings total increased

When the child thinks that enough money has been earned he can start constructing the playground To do this means a visit to each of the shops Inside we meet either Mickey Mouse, Minnie or Goofy who have catalogues of their stock of playground equipment

Up to 15 items may be chosen as long as there is enough cash available and a certain amount of planning must go into this stage to ensure that each of the three floors of the playground can be accessed by a ladder When an item is selected, the child is invited to count out the money to pay for it from the money piles and if the price cannot be exactly matched the correct amount of change has to be chosen from the till

All of the scenes in the game are animated in high resolution graphics and even Donald's voice has been synthesised for the produce market scene If he drops a fruit or vegetable he has a typically Donald-like tantrum, quacking away furiously

As an educational package this one is difficult to beat because it demands the combination of so many skills on the part of the player Typically American in its capitalist concepts, it can teach on many levels important lessons about the world of work (if such a world still exists when the child grows up!).

The documentation goes on at length about the fact that the game is so complex that the use of dollars and cents has been retained instead of converting the game to our native currency and remember Donald says, "It makes learning more fun, introducing children at an early age to other people's cultures" I feel this is probably marketing hogwash and that the real reason is tight copyright controls I feel sure that a pounds and pence variation would be more marketable in this country's schools but for me this did not detract from the high standards set by the game

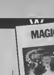
E.D.

Price. £9 95 (tape)
£14 95 (disc)

Publisher: US Gold

Address: Unit 10, The Parkway Ind Ctre, Heneage St, Birmingham B7 4LY

C64



The Professional Touch: Magic

A tape and book package to let you in on a few trade secrets of magicians and give you a little education-by-stealth at the same time The well written and nicely illustrated book goes briefly into the background, then launches into an enormous number of tricks showing you not only how to perform them, but also how to make your props They range from simple to sophisticated, but are all quite convincing Thus you can go for The Invulnerable Balloon, Multiplying Money, Eggs from Nowhere, The Tube of Mystery, Mindreader's Cards, and Vanishing Coins, and learn a few tricks of the trade for smoothing the quality of your performance

The accompanying software presents tricks which use the computer as part of your paraphernalia Divided into sections, you can select your tricks, learn how to use them, receive hints and tips, sequence the tricks you have selected together with appropriate music, then use your Spectrum not only as a helper, but as the means whereby the curtains are opened and closed too It has to be said, however, that some of the tricks really don't need a computer, and might be just that bit more impressive if performed by a mere mortal

Unlike many other supposedly educational software packages, this one is very well produced with smooth scrolling graphics, decent error trapping, and, would you believe, the built-in facility to save the lot to Microdrive Please copy this idea everyone else! D M

Price: £8 95

Publisher: Macmillan

Address: 4 Little Essex Street, London WC2R 3LF

SPECTRUM

The Market Garden Operation

Arnhem

This is a wargame converted from the Spectrum, which features events leading up to and including the "Bridge Too Far" operation of World War II The detailed manual is principally for the Spectrum with marginal notes for the Amstrad version There are one or two contradictions as a result, and though it's clear that a very real attempt has been made to provide full instructions, I still found them confusing

The whole operation can be played at one sitting, taking over six hours, or can be split into four lesser parts, and the results saved to tape The upper section of the screen scrolls over the map, the symbols being much easier to see than on the Spectrum, but some strange choices of colours for the reports area and tiny symbols cause real reading problems Indeed, if you have a green screen, then many features are invisible

The objectives for each section are given in the manual, and it's up to you to deploy your troops most effectively This is done through turns, where you issue orders to each of the symbolised military units. The computer moves them for you, and responds with its own moves. Reports are available on the results of your deployment Even the shortest scenario takes an hour, but if you like the idea, you'll find it very absorbing

I'm not a fanatic, but a wargamer friend describes the Spectrum version as brilliant, so with the superior clarity of the Amstrad, you can't go wrong

D.M

Price: £9.95

Publisher: CCS

Address: 14 Langton Way,
London SE3 7TL

AMSTRAD

Banana Man/ Secret Sam 1

This cassette takes value for money to extremes, an arcade game and an adventure for £2 50, incredible!

Banana Man is the hero of the first game, to keep him satisfied he must devour 40 banana sandwiches every minute The sandwiches appear randomly scattered around a large grid, sandwiches are eaten by simply jumping onto the same square Should you eat the required number of bananas within the time limit then the remaining time is used to calculate bonus points

Other bonus points can be obtained by eating peeled bananas or scaring Ethel the cat! Hazards come in the form of spiders, which should not be stepped upon, and solid blue blocks which may surround our banana munching buddy.

The game is fast, fun, and colourful, and I reached level nine at my first attempt!!

The second game of this dynamic duo is an adventure game called Secret Sam I The game is set in the shady James Bond type world of espionage and intrigue

Secret Sam is a man with a mission Some psychopath is about to detonate an atomic bomb and it's your job to stop him The bomb can only be made safe by inserting four seperate keys, which you must find

The adventure is absolutely littered with lots of James Bond type death sequences, but for some reason I never seem to escape in the nick of time. One word of warning — don't forget to eat your orders once you have read them, failure to do so could prove hazardous

This cassette could be the best £2 50 that you have ever parted with, but it **J.R.**

Price: £2 50

Publisher: Blue Ribbon Software

Address: Silver Hse, Silver St, Doncaster, S Yorks

BBC

Amsoft
TRAFFIC
CAN YOU HELP?

Traffic

Ever fancied doing traffic duty in the centre of London at rush hour? If so this is the game for you! You are given a bird's eye view of a section of city streets and have to keep the traffic moving Sounds easy, doesn't it? Well it isn't!

All you have to do is to change the traffic lights at each junction to prevent tailbacks Numbers on the screen give you an indication of how long the queues are Just like in real life motorists are impatient, keep them waiting too long and they'll sound their horn and get angry! To complicate matters some of them want to turn across the flow of traffic so you have to clear a path for them. There is a point scoring system, depending upon the size of the vehicle — a lorry for example counts more than a car — and points are deducted for length of queuing time. Score enough points and you are promoted to a more difficult part of the city.

The title page is immediately appealing with Big Ben chiming in the background It is obvious that a great deal of thought has gone into the presentation of this program The graphics are excellent and the traffic sounds add realism and atmosphere to the proceedings There is a green screen option You need a joystick to manipulate the traffic lights All in all a compulsive and enjoyable game Thoroughly recommended

A.W.

Price: £8 95

Publisher: Amsoft

Address: 169 Kings Rd, Brentwood, Essex CM14 4EF

AMSTRAD

★ ★ ★ ★ ★

Flipped

★ ★ ★ ★

Hooked

★ ★ ★

Keen

★ ★

Yawning

★

Comatose

Villain

Fed up with killing aliens? Try this one for size. You play the part of a rather athletic thief who spends much of his time running away from PC Plod. Each screen involves running 1000 yards, collecting points and jumping obstacles.

Before each screen, you must run 200 yards in less than 16 seconds (eat your heart out Jessie Owens). This is achieved by thrashing your joystick from side to side as fast as possible. During each sprint, you are pursued by our erstwhile copper and if you go too slowly, he catches you.

Each main screen is similar. You can obviate the need to thrash the joystick by detonating bombs which stimulate the thief's adrenalin (neat eh?). Progressive screens give higher obstacles to jump and you collect points by catching items of swag.

The running effect is achieved by scrolling the background from left to right. The figures are large sprite-like characters (over an inch tall) plonked in the middle of the screen. The use of colour and animation is excellent.

This is the most challenging VIC game I've met in a long time and it shows how much can be achieved on the VIC (in 11.5K!!) with some thought and imagination. **A.W.**

Price. £6.00

Publisher: Interceptor Micros

Address: London Hse, The Green, Tadley, Hants

VIC-20

V-Notch

This is an unusual filing program in that it can only be used for indexing, not for lots of different information.

The reason for its name is that it is a computerised version of a real card filing system. Each card has 32 numbered holes at the edge, and a corresponding heading, for example, in a photograph index the first hole may represent "monochrome", the second "colour" and so on. If that card represents a colour photo, a V-shaped notch is cut between the second hole and the card edge. If all the cards are put together, and a pin put through hole number two, all the cards representing colour photes will drop out.

As a computer version, V-Notch is quite elegant. It is written mostly in BASIC but works reasonably fast and is presented pretty professionally. The manual is comprehensive and covers most problems, although I found it confusing at first. At the back of the book are extra program routines to type in for full size printer owners and to save the whole program to microdrive. I think these should have been options from the main program, although in general it is user-friendly.

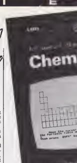
I have a few reservations. I think it is going to be too limited for many people — you can't use it for filing addresses or anything like that. It's also rather pricey. But if you think it suits your needs, quite a good buy. **P.S.**

Price: £12.95

Publisher: Transform

Address: 24 West Oak, Beckenham, Kent BB3 2FZ

SPECTRUM



Chemistry

A double cassette in a library case, covers, atomic structure and bonding, the periodic table, formulae and equations, chemical deductions, electrolysis, apparatus (two programs), acids bases and salts and organic chemistry (two programs).

All the programs are pitched at the 'O' level G.C.E., C.S.E. and G.C.S.E. standard and are intended to augment the students' formal study courses.

In my view, the least useful track is the first one, concerning atomic structure and bonding. The student is required to fill in gaps in blocks of text relating to the topic. The higher levels of difficulty are implemented by the program leaving more gaps. I do feel that this technique is of dubious educational value and that in most classroom or home environments, this would degenerate into a guessing game, with little knowledge retention. Having said that, the remaining nine programs are useful and thought provoking.

You can get an awfully long way in chemistry, by simply knowing the periodic table and the common properties of the various groupings. Program two draws the table and asks you to position the cursor over the boxes where particular elements reside and there is an option to relate this knowledge to electron configuration. Given this knowledge, coupled with a knowledge of bonding, the bright student could deduce a whole range of reactions and properties for most elements. A very relevant and useful program.

I also liked the approach to assembly of apperatus, in which the student actually assembles the glassware on screen, rather like a jigsaw puzzle and is then required to label it, adding the chemical equation for the reaction in question (complete with proper subscripts). The prep of 13 different gases is covered and you can soon differentiate your thistle funnel from your Leibig's Condenser.

I feel that this package would definitely be of benefit to the 'O' level student and perhaps a future edition of the package could adopt a more visual/imaginative approach to structure and bonding. But this is a minor reservation in an otherwise useful suite of progeams. **M.B.**

Price. £11.50

Publisher: Charles Letts & Co Ltd

Address: Diary Hse, Borough Rd, London SW1 1DW

BBC
ELECTRON

3D STUNT RIDER
Amsoft

3D Stunt Rider

"Experience the thrills and spills of professional stunt riding in the safety of your armchair" goes the advertising patter. I put on the old racing leathers, sat astride my 750 cc stool, kick started the Amstrad (something I have been tempted to do) and roared away. In fact, fizzled would perhaps be a better description as this game is not going to set the software charts alight

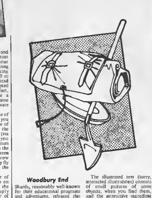
Jumping buses is the name of the game and at the start you are presented with a 3D view of the roadway leading up to the ramp Accelerating away (via keyboard or joystick) you attempt to reach an optimum speed by the time you reach the bottom of the ramp The screen then changes to a side on view of the jump as you hopefully fly over the buses and onto the ramp on the other side

The game has a number of levels, one successful jump on one level takes you on to the next The levels simply correspond to the number of buses that you have to jump and thus the number of points awarded — on my first attempt, five buses I pushed the speed before take off up to 90 mph, thinking that this is the sort of speed needed for clearing a few double deckers and sailed over the buses, the ramp and much of the following ramp Careful experimentation and a number of attempts later, I found that my ideal take off speed is around 20 mph!

Every level equals an additional five buses and around an extra 15-20 mph of speed to clear them I managed to reach level 9 and cannot imagine there being many levels after this as I was travelling flat out on approach and only just reached the ramp A nice game with good graphics (I liked the animated hand reving the throttle) but lacking the options and challenge to make it playable for more than a couple of hours and certainly not justifying the high price tag **C.G.**

Price: £8 95
Publisher: Amsoft
Address: Brentwood Hse, 169 Kings Rd, Brentwood, Essex

AMSTRAD



Woodbury End

Shards, reasonably well-known for their educational programs and adventures, released this "illustrated text adventure" for the recent PCW show. I've already seen a couple of their earlier adventures, most notably Pettigrew's Diary, and was expecting something a little more interesting than was delivered.

As is usual in these cases, the background documentation promised all sorts of goodies like an "interacted illustrated novel" and "the first genuinely original software . since Elite" — well, we usually try to discount hype like that, but I was intrigued Waking in a darkened room, unable to move and with no memory I soon found the broken glass, cut the rope binding me and removed the blindfold expecting to be thrust headlong into the theme of a peaceful village plagued by mysterious events The plot as detailed sounded like an absorbing mixture of John Wyndham and Nigel Kneale and I'm a sucker for those "things aren't quite what they seem under the surface" fantasies Sadly, none of it appeared

The illustrated text (sorry, interacted illustrations) consists of small pictures of some objects, when you find them, and the interactive ingredient means (I think) that you're sitting at the keyboard typing it in No marks for originality either — experienced adventurers will soon get bored and the novice will get increasingly frustrated by the program's inability to recognise even its own limited vocabulary Frankly, I gave up long before the real time score became impressive, the clock tower started chiming menacingly or I finally solved the mystery of the missing children, the villagers with rather alien appearances, etc What possessed Shards to claim this as the best thing since Elite is probably the only mystery worth investigating

There is, however, a prize of the inlay painting for the best score — at least I believe so, as the press release gives the closing date as 30th June 1985 and the game is only released in September More temporal distortion at work For bored masochists only — especially Electron ones as they admit some responses on that machine may be a little slow **D.R.**

Price: £9 95

Publisher: Shards Software

Address: 189 Eton Rd, Ilford, Essex IG1 2UG

BBC
ELECTRON

TALOS
SILVER SOFT

Talos

The English countryside has become a battlefield, only the Crown of Eternity will restore normality Alas, the Crown has been locked in a hidden vault and the only hope of reclaiming it rested on the robot, Talos, who has been smashed into seven pieces and scattered across the land

His hand is left, idly tapping its fingers You control it and must scour the two-hundred screen countryside for the rest of the body Only when Talos has been rebuilt can the Crown be liberated

If Talos collides with one of the many beasts, his energy is diminished Thankfully, they don't appear immediately a screen is entered Talos dies when his energy runs out A bull, immune to Talos' fire bolts, enters if you spend too long in a screen

If you discover part of Talos's body that can't yet be fitted on you can drop his magnet and use a compass to find it later

As well as fields, there are a number of ponds, which can be investigated to reveal fish, water weeds and, hopefully, part of the robot's body. Graphics are excellent, including signs and other objects littering the countryside, and the animation is very smooth

The instructions are clear and informative, a welcome change from those games that expect you to discover everything

Although it is a similar type of game to Atic Atac, Talos is more than just another clone, and makes for an interesting and enthralling game **S.J.E.**

Price: £7 95

Publisher: Silversoft

Address: Unit 7D, Kings Yd, Carpenter's Rd, London E15

SPECTRUM

COMMODORE 64
HYPER SPORTS
Konami
the name of the game

BARRY McGUIGAN
WORLD CHAMPIONSHIP
BOXING
COMMODORE 64 128
ACTIVISION

Hyper Sports

This is a conversion from Konami's arcade game of the same name which has been available for MSX computers for quite some time

Personally I prefer the MSX version to this one but despite this I still rate the game very highly which says a lot for the quality of the program

There are six sporting events within the program and qualifying score must be achieved before the next event can be entered This is unfortunate, I would prefer to be able to practice an individual game or to be able to change the order of events

The sports are swimming, skeet shooting, long horse, archery, triple jump and weight lifting A fair spread, I think

Swimming is a waggle your joystick game (though there is a pummel the keyboard option) Occasionally your athlete must breathe and pressing the fire button achieves this only if his head is above water at the time

Skeet or clay pigeon shooting is more a test of reaction than stamina The two gun sights are automatically trained onto the flying discs and the gun fires when you move the little man's gun left or right depending on which sight you choose The targets come thick and fast giving little time for a reasoned decision so you must rely on instinct to see you through

The run up to the long horse is computer controlled but the player must press fire to make him jump onto the springboard, and press again when the athlete reaches the vertical headstand position on the horse Then more waggling is called for to make him perform as many aerial somersaults as possible before landing Even landing is not straight forward He must land on his feet to score highly

Archery is very enjoyable and requires a high degree of timing Firstly, you must release the arrow at the moving target allowing for a preset crosswind Then you must hold the fire button for long enough to reach an elevation of about five degrees

Triple jumping is similar to the long horse competition Run up is automatic and fire is pressed to initiate the jump Then as each part of the hop, step and jump action is entered, the button must be held to give an elevation of 45 degrees

Finally, your tireless athlete must lift weights Frantic waggling controls the power of the lift and, when the time is right, pressing the fire button gives the final push to raise the weights over the athlete's head You must continue waggling until all three judges give you the green light

As you can see the games are varied in their approach and each one tests a different range of skills The graphics maintain the cute qualities of the original games with the athlete responding to the results of his labours in suitable fashion I think Konami will be very pleased with this conversion, I know that I am **E.D.**

Price: £8 95

Publisher: Imagine

Address: 6 Central St, Manchester

C64

Barry McGuigan World Championship Boxing

Yet another boxing simulation which relies on a big name to help it sell This time it's Barry McGuigan in Activision's corner and characteristically it is not merely a boxing match

One or two players can enjoy the fun of rising from being a new professional, through contender, to a crack at the championship against Barry McGuigan himself (or at least his computer counterpart)

At the beginning of the game you can select your boxer determining caucasian or negroid appearance, colour of kit, style of boxing and, of course, his name

Then you can opt for being a new pro or a contender, the result of which determines where you lie in the league You can then choose to fight one of the two boxers above you or the one below you in rank This choice determines how difficult the fight will be for you

On making your decision you are shown the vital statistics of the selected boxer and given the chance to change your mind if you wish

Assuming that the challenge is accepted you must then train your boxer by devoting training time in various areas to build up strength and stamina according to how many weeks remain before the fight

Now the fight commences The view is a lateral view of the match as in Alligata's Knockout The movements of the fighters are controlled by the computer according to the style of boxing chosen but the punches are selected by the player

For this you need a joystick and there are two basic types of punches available, inside and outside The difference being that inside means fighting at close quarters where hooks, crosses 'and uppercuts are available, and outside means arms length fighting using jabs and crosses

Each boxer has a stamina value, which reduces as blows are exchanged, a miss taking more from this tally than a hit and the more explosive inside punches being the most tiring If this tally falls below 10 a knock down is imminent, possibly even a knockout

At the end of each round a chart is displayed which shows the condition of the two boxers This gives endurance, stamina, strength and agility as a percentage of full fitness From this you can gauge your strategy for the next round, attack or defence

Each bout has ten rounds and a points decision will be given if a knockout does not occur within this time

The two player game varies from the single player game because you cannot define your boxer Instead each player selects a fighter from the ranking league table and a two joystick battle royal begins

As a simulation of boxing this is about as close as you'll get to the real thing and let's face it, it's about as close as any of us want to be **E.D.**

Price: £9 95

Publisher: Activision

Address: 15 Harley House, Marlebone Rd, Regents Park, London

C64

The Way Of The Exploding Fist

Many games found in the arcades make the transition to home computer software. Unfortunately, a large proportion of these arcade copies fall well below the original quality. Thankfully, Way Of The Exploding Fist is not one of them.

Based around the popular Kung Fu games, Melbourne House's version for the Amstrad is graphically excellent. The chunky fighting characters, twist, turn, duck, kick and punch with great detail. I particulary like the expression of pain, nay, agony on the face of the victim when he is caught by a perfect point-scoring whack.

Under keyboard or joystick control, your man can perform 18 different moves from flying kicks to backwards and forwards somersaults. Many of the arcade games feature two joysticks so it was quite an achievement to get all the moves onto one joystick. The control of the character is tremendous — within an hour I felt that I had complete control of my man and the wide range of moves available.

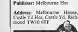
You fight 30 second bouts with either a second player or a computer-controlled opponent. If you manage to obtain a winning score of two perfect falls or four competent hits then you win and progress on to another fight. Usually two wins are enough to move you up a dan (the martial arts' measure of attainment), though the competency of the computer-controlled opponent seems to get better and I think it is very difficult to get past fourth or fifth dan. If a win is not achieved at the end of the bout, then the referee gives a decision either way.

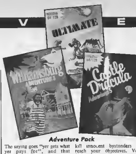
There are four different backdrops, all very oriental in design. I found the game much fun to play particularly with a human as the second player as the computer becomes a little predictable. All in all, a vastly entertaining game that should make it to the top of the Amstrad charts. **C.G.**

Price: £9.95

Publisher: Melbourne Hse

Address: Melbourne House, Castle Yd Hse, Castle Yd, Richmond TW10 6TF





Adventure Pack

The saying goes "yer gets what yer pays for", and that certainly applies to this package from Microdeal. The pack contains three text adventures, Williamsburg, Ultimate and Castle Dracula. They are all straight conversions from programs which appeared on the Dragon 32. Little has been done to improve them, although use has been made of the function keys to provide commonly used commands.

Castle Dracula and Williamsburg follow the usual walk around, collect items and solve the puzzles theme — although the puzzles were a little thin on the ground — they even have mazes. In Castle Dracula, you play the part of one Baron Von Helsing, who very foolishly loses his wife during the night, I'm sure I don't have to fill in the rest of the plot. There is little atmosphere to the adventure, with location descriptions limited to one or two sentences, and only a very few puzzles. On the whole I found it rather boring.

Williamsburg seems a little better, although descriptions are still as terse. The idea in this second adventure is to find the legendary? Golden Horseshoe. To do this you must wander around the colonial town of Williamsburg collecting items in a specific order whilst trying to deal with sarcastic waiters, parish ghosts and absent minded students, to name a few. There is more to think about in Williamsburg than in Castle Dracula, and there are even vague signs of humour.

One thing that I found disturbing about both the above games was the need to shoot or kill innocent bystanders to reach your objectives. Von Helsing is turned into some sort of Transylvanian Dirty Harry, and your character in Williamsburg would make Rambo quake! I think most people would prefer to use their wits in an adventure, not the pointy end of a gun.

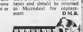
Finally we come to Ultimate, which is far from it. The Adventure involves buying items in a market and then wandering off to various locations to find seven hidden treasures, which you then return to the market to collect a reward. There is some initial interest in discovering how useful certain items are in some situations — the minesweeper in the minefield for example — but this soon wears off. The objective is to make £1000 profit — I reckon you need to find the treasures about four times to do this — and with no save routine this is definitely one for insomniacs.

At first sight three adventures for under seven quid seems like excellent value. However looks can be deceptive, all three are dated and are written in 100% basic. Microdeal reckon that the programs are aimed at the 10 year olds who would be able to break into the program and learn from them — a littl like Entersoft's non starter range. Actually being written in BASIC did prove an advantage as I could get around the bugs in two of the programs, Castle Dracula and Ultimate. These have now been corrected, although any packs bought at the PCW show will contain duff tapes and should be returned to Microdeal for replacement. **D.M.R.**

Price: £6.95

Publisher: Microdeal

Address: 41 Truro Rd, St Austell, Cornwall PL25 5JE



ORM AND CHEEP

Narrow Squeaks

The problem with children's games are that they are often classed as educational aids when they are no more educational than space invader games. At least Macmillan's have avoided this pitfall with their adaptation of the popular children's television programme Orm and Cheep.

For those who may not have met this dynamic duo before, Orm is a worm and Cheep is a chick. In the game their friends Mouse, Mole and Hedgehog feature in a battle against Crow, Rat and Cat. There are actually four pleasantly animated games on the tape: Cheep's Game, Crow's Game, Rat's Game and Orm's Game.

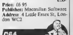
Cheep's Game involves collecting washing up and stacking it at the side of the screen. When the last item is placed on the pile the whole column crashes to the floor waking Orm from his slumbers.

Orm then takes a stroll but is cornered by Crow and his game begins. Crow's game is like a visual form of Simple Simon. Each of the creatures move alternately in a fixed pattern and the player has to indicate when the pattern changes.

Next, Rat has cornered the animals in a tree hollow and hedgehog has to protect them from rat and guide them to the exit.

The final game shows Orm floating on his bed during a flood. The evil animals have taken refuge on floating logs and Orm must upset these and knock them into the water. The only control in all of these games is achieved by pressing any key, including the joystick fire button. Most of the games are fairly difficult to master but success is rewarded by a score sheet which reveals a section of a picture, depending on how well you did in the last round. **E.D.**

Price: £6.95
Publisher: Macmillan Software
Address: 4 Little Essex St, London WC2



Robots could be on the rampage in your home if you win a droid construction set from Milton Bradley in this week's competition

ROBOTIX

This is your chance to give a robot a home and there are three of Milton Bradley's Robotix construction systems to be won this week. The sets give you the chance to design, construct and control animated Robots.

The first prize is the top of the range R4000 set, the second prize winner receives the R2000 set and the third placed winner carries off the R1000 system. These articulated robots are put together by means of hexagonal joints and when attached to motor systems driven by a battery unit they spring into action.

The three sets have a combined retail value of £150. The futuristic toys have also been recognised as having a value in teaching the rudiments of computing as the robots can be interfaced with micros.

The Robotix sets were used in the government sponsored Micro Electronics Education program to teach school children the basics of control technology. But above all these sets are great fun and if you are a winner they will leave all your other toys standing.

How to enter

- Study the two diagrams — there are a number of differences between them. Circle the differences on the entry form and seal the marked diagram with the entry coupon in an envelope. Remember to write clearly the number of differences you found on the back of the envelope.
- Post your entry to Robotix Competition, Home Computing Weekly, No 1 Golden Square, London W1R 3AB. Entries close at first post on Friday 25 October 1985.
- You may enter as many times as you wish, but each entry must be on an official coupon — not a copy — and sealed in a separate envelope.
- **Important:** please follow carefully the guidelines on entering — incomplete coupons and entries in envelopes with no numbers on the back cannot be considered. If you are a winner, the coupon will be used as a label to send your prize, so clear writing is essential.

The rules

- Entries will not be accepted from employees of Milton Bradley Ltd, Argus Specialist Publications and Alabaster Passmore & Sons. This restriction also applies to employees' families and agents of the companies.
- The How to enter section forms part of the rules.
- The editor's decision is final and no correspondence can be entered into.

Robotix Competition

Entry Coupon

Name ______________________________

Address ____________________________

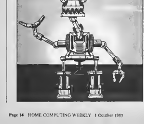
____

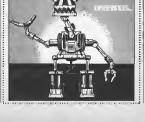
____

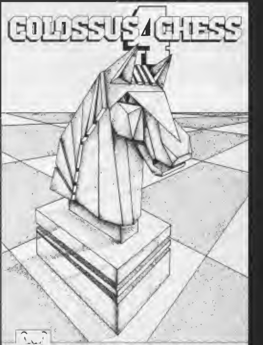
______________ **post code** ______________

Number of differences found ______________

Complete clearly and fully — if you win a prize this coupon will become your address label. Post to: Robotix Competition, Home Computing Weekly, No 1 Golden Square, London W1R 3AB. Closing date: first post on Friday 25th October 1985. Please remember to write the number of differences clearly on the back of your envelope.







CDS Software Ltd

Available for the Commodore 64 and 128

Casette £9·95 Disk £14·95 also available: Apple II £29·95

CDS Software Ltd, Silver House, Silver Street, Doncaster DN1 1HL (0302) 21134 (5 Lines)

PERIPHERAL

Although the Amstrad CPC464 has been with us for a year now there have been few sideways ROMs produced to date. Micro Power are trying to put this to rights

When the Amstrad computers were designed they were built with the ability to accept sideways ROMs Sideways ROMs are chips which can contain other languages, utility programs, wordprocessors, in fact any program at all These can be accessed from BASIC via one of the Amstrad's bar commands, or they can even be used instead of BASIC The beauty of these ROM based programs is that they can be accessed instantly at any time

It has been the BBC computer's ability to use such ROMs that has been one of its main strengths. Unfortunately Amstrad did not see fit to equip the computer with any sideways ROM sockets as standard This fantastic potential has therefore lain dormant until now. Micropower, a company with many years eeperience with the BBC computer, have just released their "Super Power sideways ROM card"

This little grey box, which has the same dimensions as the Amstrad disc interface, can contain up to seven 8K or 16K ROMs The back half of tha case is a push-fit and can therefore be easily removed to give quick access to the ROMs With the beck removed you are faced with a row of seven 28 pin ROM sockets. These are labelled A to G from left to right and should ideally be filled up in that order

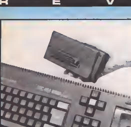
Fitting the ROMs is quite straight forward, each ROM has a small notch in one end which should be at the top of the card when the ROM is in place The only thing to beware of when fitting such ROMs is that all of the 28 legs go into their respective holes in the socket It is easy to push the ROM home with one or more of its legs bent underneath the chip With the ROM in place all that's left to do is slip a shorting link over one pair of addressing pins which are located below the ROM sockets Essentially these give the user the option of powering up in a ROM other than BASIC, providing that the ROM present in socket 0 is a foreground ROM This may all appear a little confusing but it is thoroughly explained in the excellent accompanying manual

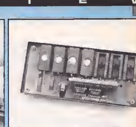
With the ROMs inserted and the addressing links set, the ROM card is ready to be fitted onto the expansion bus at the rear of the machine A further edge connector is supplied on the rear of the card to allow for the fitting of a disc Interface or some other peripheral.

As such a peripheral is not much use without any ROMs to plug into it, Micropower have released two sideways ROMs for use with the card The first of these ROMs contains a mailing list and club membership program This ROM is essentially a database which has been tailored to meet the requirements of businesses and clubs

The program is called up using the bar command Imail, at which point the user is presented with the main menu The 110 options can be accessed via the numeric keypad or by pressing the control key plus the initial letter of the option Unfortunately this use of the numeric keypad for option selection means that all numeric data has to be entered using the numbers which run along the top row of the keyboard

Ctrl/E or function key 0,





allows the user to use the data entry option. The screen is divided into several distinct sections, the first of these being the label data window. Any information entered in this area will appear on the address label when it is printed. Data such as name, address, membership no., and customer no., should therefore be entered in this section.

The next area is available for the entry of any data which is relevant to the customer but which you wouldn't want appearing on the label, e.g. their phone number or whether or not they are prompt payers. Finally the entry can be classified under one or more user definable headings. In the case of club membership these could be type of membership (junior, adult, family) or the month in which they joined or whether or not they had paid their subscriptions. In fact you can assign up to 20 such classes, these can then be used to retrieve records selectively, either on the screen or as printed labels.

The labels can be used for mailing club news letters or sending sales literature to selected customers. With the high cost of both printing and postage it is far more economical to send your literature to customers who are likely to be interested in your product. By clever use of the classification system you can print address labels for these selected few.

The other options on the main menu are concerned with the filing and manipulation of the database. They include string search routines, the printing of labels or labels and data, altering system parameters (pen/paper colour etc.)

The program is capable of holding over 300 entries in RAM at any one time. As this may prove limiting to some businesses, the data can be stored as two or more separate files which will then be treated as one large file when carrying out printing and searching operations.

The mailing list ROM is supplied with an excellent manual, which contains both a reference section and a step by step hands on session which leads you gently through the program. If this was not enough there is even an on screen help system which describes each option as it is selected, this can be switched off by pressing shift/escape.

The Mailing list/Club membership ROM is a very powerful but friendly piece of firmware. The fact that it is ROM based makes it even more attractive due to its instant accessability and the large amount of user RAM available therefore.

The second of the two ROMs is destined to become a standard utility ROM with those disc users who wish to get the most from their drives. The ROM is known as DiscPower and is invoked using the bar command |dp.

I have often found in the past that using a utility ROM such as this can be almost as educational as it is functional. There is a certain satisfaction in knowing how your programs are stored on disc. This knowledge can be very useful when you have done something silly, such as erasing a valuable file. The first section of the manual is written with such users in mind. It contains a full explanation of how files are stored in a CP/M based system, and also how to recover accidentally erased files quickly and simply.

The first option on the menu displays the file directory, this can be edited and resaved if necessary. The next two options are concerned with reading files or parts of files from disc. The "Read disc sector" option allows the user to specify the track and sector numbers of the part of the disc to be examined. The information is displayed in tabular form, with the data being presented in both hexadecimal and ASCII. The "Read disc file" displays the same consecutive sections of a single file. Those of you who are familiar with the way that CP/M stores its files on disc will appreciate this facility.

Option four is the "Read ROM" facility, this lists all of the ROMs present in the machine. The ROM to be examined is selected by use of the cursor keys. Once the ROM has been selected the first 1K of the ROM is loaded into a buffer at &A000 and the memory editor entered. By use of option 7 the user can disassemble any machine code which has been loaded into the buffer, this includes any ROMs.

The memory search routine is both comprehensive and easy to use. The search string can be either a sequence of bytes or ASCII characters. Cheracters must be enclosed between quotes or / cheracters, the / character will check for both upper and lower case occurences of the string. The string can also contain wildcard characters. Upon locating the target string a single line of the editor option is displayed.

Option 9 calls up a seperate utilities menu, this contains several routines which make living with Amsdos a little more bearable. Discs can be formatted or backed up without having to resort to using CP/M. "Disc map" will graphically display the whole contents of the disc, whereas "File map" will show where each block of one particular file is located. It even displays files which have been erased but not yet overwritten. A read/write file option allows the user to read a complete file into memory whilst displaying such information as file type, length, and load address. The write routine can be used to write any block of memory to disc under a filename, the user must specify start address, end address, execution address, and file type.

In the couple of days that I have been using this ROM I have come to depend upon it. The availability of such ROM based utilities, make what is already an excellent computer even better!

J.R

Publisher: Micropower Ltd

Address: Sheepscar Hse, Sheepscar St South, Leeds LS7 1AD

Super Power Sideways ROM Card

Price: £39.95

Super Power Mailing List ROM

Price: £39 95

Super Power Disc Users Utilities ROM

Price: £39 95

BUMPER DUMPER

This save and laad procedure for the BBC from Calin Parbery will save you valuable disc space

Saving screen dumps on the BBC micro is a simple process using *SAVE < asfp > sss fff where sss is HIMEM and ff is &7FFF the top of the video RAM, but at 20K each in MODEs 0, 1 and 2 you can only save five to one 100K disc and if you want a program on the same disc to display the screen dumps then you are limited to four

This new screen dump procedure will save disc space on most screen dumps but it depends what is on the screen The procedure does this by only saving the coloured parts of the screen and by saving just the beginning and end addresses of a block of colour and the content of the block

The screen dump is saved to a file so the normal *LOAD < asfp > will not load the screen dump, to do this you will need to use the loading procedure

The one snag with using this procedure is the time it takes to save the file to disc, but if you want to save more screen dumps on one disc it is worth waiting for Screen dumps can also be mixed by loading one on top of the other without clearing the screen

Variables

Loading Procedure

address% initial screen location
start_address% start address of a block of colour
end_address% end address of a block of colour
count% added to start_address% until it equals the end_address%
file% contains the channel number of the file that is being accessed
title$ name of the file that is to be loaded

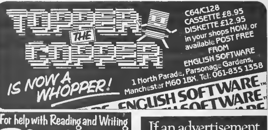
Variables

Saving Procedure

address% used to check through all the screen addresses from HIMEM to &7FFF
content% contains the contents of the screen address being checked
content1% contains the contents of address% minus one
count% used to count how many addresses contain the same value
old address% equal to address
new address% new address after count has been added to address% when the end of a block of colour has been found
file% contains the channel number of the file that is being accessed
title$ name of the file that is to be saved

```
  1REM******************************
  2REM*    Dumper (SAVE PROC)       *
  3REM*    By C. Parbery            *
  4REM*    13th July 1985           *
  5REM*    Program size 712 bytes   *
  6REM******************************
  7REM title$= name of file
  8
  9
 10MODE4
 20file%=OPENOUT title$
 30FORaddress%=HIMEM TO &7FFF
 40content%=?address%
 50content1%=?(address%-1)
 60IF content1%=0 AND content%<>0 PRINT#file%.address%
 70IF content%<>0 PROCsqueeze
 80NEXT
 90CLOSE#file%
100END
101
102
130DEF PROCsqueeze
140old_address%=address%
150count%=-1
160REFEAT
170count%=count%+1
180content2%=?(old_address%+count%)
190UNTIL content%<>content2%
200new_address%=old_address%+count%
210PRINT#file%,content%
220PRINT #file%,new_address%
230address%=address%+count%-1
240ENDPROC
```

```
  1REM***************************
  2REM*     Dumper (LOAD PROC)        *
  3REM*     By C. Parbery             *
  4REM*     13th July 1985            *
  5REM*     Program size 681 bytes    *
  6REM***************************
  7REM MODE must be the same as when                 saved.
  8REM title$= name of file
  9
 10MODE4
 20count%=0
 40file%= title$
 50INPUT#file%,start_address%
 60REPEAT
 70INPUT#file%,address%
 80IF address%<=HIMEM THEN PROCscreen ELSE start_address%=address%:count%=-1
 90count%=count%+1
100UNTIL EOF#file%
110CLOSE#file%
120END
121
123
150DEF PROCscreen
160INPUT#file%,end_address%
170REPEAT
180?(start_address%+count%)=address%
190count%=count%+1
200UNTIL start_address%+count%=end_address%
210count%=count%-1
220ENDPROC
```


TOPPER THE COPPER IS NOW A WHOPPER!

C64/C128
CASSETTE £8.95
DISKETTE £12.95
in your shops NOW, or
available POST FREE
FROM
ENGLISH SOFTWARE
1 North Parade, Parsonage Gardens,
Manchester M60 1BX. Tel: 061-835 1358

ENGLISH SOFTWARE™

For help with Reading and Writing
☎ 01-405 4017

Since 1975, 350,000 adults have been helped to read and write better. If you want help look for this sign.

For further information
Adult Literacy & Basic Skills Unit
PO Box 213 London WC1V 7ET

If an advertisement is wrong we're here to put it right.

If you see an advertisement in the press, in print, on posters or in the cinema which you find unacceptable, write to us at the address below ✓

The Advertising Standards Authority
ASA Ltd Dept 3 Brook House Torrington Place London WC1E 7HN

SWOT SPOT.

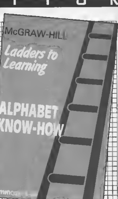
The Ladders to Learning series from McGraw Hill get a thorough going over this week from Margaret Webb. If you are a parent with a C64 read on...

It always causes great excitement and interest in my home when the Post Office deliver a large parcel. When that parcel contains practically all of a new range of educational software, it is hard not to switch on the computer and load them without taking the time to look at the cassettes and work out the best approach to what could be a daunting task.

The new range in question is from McGraw Hill, the book publishers. Anyone who read John Henderson's column on choosing educational software (HCW 123) will have noted that he says that "most reputable publishers want to protect the quality of their products" and this would seem to be the case with this range. It has taken the publishers three years to develop the range with the help of teachers. The range of twenty-eight titles is aimed at the three to thirteen year age group — that is to say pre-school to mid-secondary school and covers the basic subjects of Mathematics and English.

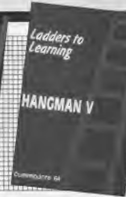
The English programs cover alphabet, dictionary and grammar, the mathematics cover everything from basic addition and subtraction through multiplication and division to algebra, fractions and graphs. There is also a program which doesn't fit into either of these categories. This is a Balloon game which deals in an interesting way with the subject of the atmosphere and it's simple physics.

This program is in two parts, the first being the teaching program that deals with all aspects of the atmosphere, it's



McGRAW-HILL
Ladders to Learning
GRAPHS 1
Commodore 64

Ladders to Learning
PLACE VALUE
Commodore 64



various layers, constituents, how it behaves, winds and how they move Once this has been read through, there is an option to re-read it or plunge straight in and play the next section

This has the feel of a board game It consists of a board with flight paths over the ocean Up to four people can participate A number spinner determines whether a question on the atmosphere must be answered or whether a direct move is made (the questions are multiple choice) A correct answer can gain up to four points The first to land on his or her balloon is the winner Forfeits are included making it an enjoyable game

Since I didn't receive all of the programs in the series, I can only comment on those I have. All of these are aimed at the eight to thirteen years age group but can be used with younger children if under supervision. Here is a brief summary of the titles I have used:

Mathematics

Add/substract — **Henry Hilo**, a cartoon character, teaches how to add and subtract simple numbers and shows what happens when larger numbers larger than ten are involved

Place Value — this is a teach and test program which looks at basic place values i e hundreds, tens and units and at the more complex powers of ten

Skill tester — using Henry Hilo again, the program checks just how much the user knows about using the four basic rules of arithmetic

Multiplication I — an introduction to multiplication using graphics to show sets and how they grow into multiplication tables

Multiplication II — goes over what was learnt in part 1 and then shows how to multiply numbers larger than 10

Division I and II take the same form as Multiplication I & II by showing that subtraction and sharing are the basis for basic and long division

Problem solving I & II — Henry Hilo explains how to look for keywords when trying to solve mathematical problems — i e thorny old questions about man digging holes

Fractions I & II Henry Hilo again This time taking division one step further and explaining about fractions and how they are part of a whole The second part explains in more depth about numerators, common denominators and improper fractions.

Graphs I & II — In part 1, Henry Hilo teaches, with use of colourful graphics, how graphs can be used to show information Part two uses bar and column charts and helps the child to both read them and build his own

Algebraic Relations — Teaches how symbols can be used instead of numbers Uses progressive teaching and testing

English Programs

Alphabet know how — this teaches the child how to arrange letters and words into alphabetical order It assumes prior knowledge of the alphabet

Dictionary Use — teaches the child how to use a dictionary efficiently How to look up the meanings of words quickly and to check spellings, pronounciations and parts of speech

Word Power — a grammar lesson Disects sentences and shows what the parts of a sentence are, i e verbs, adjectives, nouns and adverbs

Hangman 3,4,5,6 — the paper and pencil game transferred to the computer Tape 3 has a set of words aimed at the eight to ten year olds, tape 6 has words for the secondary age group There are options to add your own words and to play against the computer, or a friend

All of these programs use good clear screen layouts with interesting graphics The information is given in a clear and concise manner with lots of opportunity to re-cap if something is not understood Fast loaders are used — making life just that bit easier I do, however, have a few gripes

Firstly, many of the tapes are not menu driven Instead you have to work your way through the program This is not really any use for teaching the average eight year old Learning is best done in short bursts since boredom soon sets in and the attention tends to wander if too large a chunk of material is attempted

Many of the programs come in more than one part and in some cases there was duplication of material It would have made more sense if a topic, for example multiplication, was covered entirely by a single tape I suspect that this option may not, however, be so commercially attractive I have no idea whether disc based material will be available If it is then this comment is even more relevant

At £7 99 per cassette, this series is rather expensive, especially if you need to buy several tapes to cover a topic

Notwithstanding these points, the real judge of any software is the person who is going to use it or, in the case of educational software, the parent or teacher It is up to you to look at Ladders to Learning and decide for yourself if the material contained in the programs is what you are looking for. **M.W.**

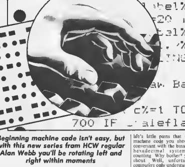
Price £7 99

Publisher McGraw Hill Book Company

Address: Shoppenhangers Rd, Maidenhead, Berks SL6 2QL

C64

CODE IT!



Beginning machine code isn't easy, but with this new series from HCW regular Alan Webb you'll be rotating left and right within moments

In this series, I plan to teach the rudiments of machine code for the 65xx series of micro-processors, and the C64 in particular. Before you run from the room screaming, I plan to lighten the load by using plenty of useful examples so that you will gain some practical knowledge instead of lots of theoretical clutter. To reinforce this concept, the final part will discuss in detail the use of the routines in the C64's Kernal and Basic ROMs so that you will be able to manipulate strings, use floating point and perform other bizarre activities.

First I must emphasise one point, **machine code is not difficult**. It may be tedious, tricky to debug, compact and fast, but it isn't difficult. If you've used a programmable calculator, you're almost there.

To make any progress in machine code, you must have some basic tools.

First you need a decent assembler. Don't think you can write anything substantial on a machine code monitor, you can't — if you want to keep your sanity. Similarly, hand assembling is for budding lunatics only. You should find a multipass assembler capable of supporting the usual pseudo op codes and labels. Out of those on the market, I consider the best to be

1 Micro Assembler from Supersoft (cartridge £55)

2 Assembler Monitor 64 from First Publishing (Disc based £20)

I have used both of these and can vouch for their excellence. They may not be cheap but if you want a long and pleasant relationship with machine code, they are worth the money.

Next you will need a decent machine code monitor. This should include options for setting Break Points and single stepping (for debugging) and a disassembler. The First publishing package above includes an excellent monitor. A good alternative is the Zoom monitor from Supersoft. Incidentally, I don't have shares in First Publishing or Supersoft, they're simply the best products I've found.

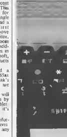
Finally, you will need a decent text book on the 65xx processors. I use Rodney Zak's excellent book but there are others about.

Throughout this series, I will give source codes as given by the First Publishing Assembler. Figure 1 shows some of its features.

You can see how much information the assembler gives. This is a minimum that any assembler should provide.

Enough general aspects, I want to give the only real nasty dose of theory necessary to learn machine code. Sorry, but it doesn't take long. It is one of life's little pains that to use machine code you should be conversant with the binary and hexadecimal systems of counting. Why bother? you all shout. Well, unfortunately computers only understand two types of signal, zero and one. This is the basis of binary. You will need to manipulate individual bits of numbers, hence the need to learn binary.

The drawback with binary is that to represent a byte on the C64 you need eight binary digits. To represent the biggest

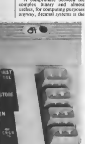


```
10:     C000                    .OPT P4    <-PRINT SOURCE CODE

20:     C000                    *=    $C000 <-ASSEMBLE AT $C000

30:     03E8            CHAR    =     1000  <-LABEL LOCATION 1000

40:                     ;

50:     C000 A9 08      START   LDA   #<MESSAGE <-LOW BYTE OF MESSAGE

60:     C002 A0 C0              LDY   #>MESSAGE <-HIGH BYTE OF MESSAGE

70:     C004 20 1E AB           JSR   $AB1E <-PRINT MESSAGE

80:     C007 60                 RTS         <-END OF ROUTINE

90:                     ;

100:    C008 48 4F 4D MESSAGE .ASC "HOME COMPUTING WEEKLY" <-MESSAGE

110     C01D 00                 .BYTE00      <-MESSAGE END

]C000-C01E <-START AND END OF PROGRAM
```

Figure 1

address in the memory you would need sixteen digits — mind boggling! In other words, whilst the computer is content to work in binary, the system is much too awkward for us mortals

A compromise between the complex binary and almost useless, for computing purposes anyway, decimal systems is the hexadecimal system Hexadecimal involves counting to the base of 16 and offers a means of representing any 8 bit number in two digits making life much easier You will soon find it easy to recognise hexadecimal numbers and learn their use



Hold onto your hats, here's the nasty bit The general form of any number to any base is

$A_nB^n + \quad A_3B^3 + A_2B^2 + A_1B^1 + A_0B^0$

The As are the digits comprising the number and B is the Base The decimal system uses the base 10 so the general form of 1,234 is

$1x10^3 + 2x10^2 + 3x10^1 + 4x10^0$

which is

$1000 + 200 + 30 + 4 = 1234$

Let us try a binary number Binary uses base 2 so the number 10111 has the form:

$1x2^4 + 0x2^3 + 1x2^2 + 1x2^1 + 1x2^0$

which is:

$16 + 0 + 4 + 2 + 1$

or 23 in decimal

Hexadecimal has a slight complication in that we must have a way of representing the values 0 to 15 This is done by using 0 to 9 to represent themselves and A for 10, B for 11 and so on up to F for 15. This system uses the base 16 so the number AB13 has the general form

$10x16^3 + 11x16^2 + 1*16^1 + 3*16^0$
(remember A = 10, B = 11)

which is

40960 + 2816 + 16 + 3 = 43795 (decimal)

The highest address used by the 64 is 65535 which is FFFF in hexadecimal so you never need more then four digits Most assemblers are able to convert from one base to another and the normal prefixes used are·

$ for hexadecimal — eg $FFD2 see line 70 of the example source code for an example

% for binary — eg %1101101

This means that if you want to put off learning hexadecimal, you can use decimal in your source codes

To convert from decimal to the other bases, you simply divide repeatedly by the base raised to differing powers eg

To convert 100 decimal to hexadecimal

100 is less than 16^2 so starting with 16^1

100 divided by 16^1 gives 6 with 4 remainder

4 divided by 16^0 gives 4 with 0 remainder

so

$100 = 6x16^1 + 4x16^0 = \$64$

Let's try converting 35 to binary 35 is less than 2 so we will start with 2^5

35 divided by 2^5 gives 1 and 3 remainder

3 divided by 2^4 gives 0

3 divided by 2^3 gives 0

3 divided by 2^2 gives 0

3 divided by 2^1 gives 1 and 1 remainder

1 divided by 2^0 gives 1 and 0 remainder

so

$35 = 1*2^5 + 0*2^4 + 0*2^3 + 0*2^2 + 1*2^1 + 1*2^0 = \%100011$

To give you some practice with base conversions try the following exercises

1 Convert the following to decimal

a) $10FC
b) %1101101
c) $033B
d) %10011

2 Convert the following to binary,

a) 25
b) 37

3. Convert the following to hexadecimal

a) 255
b) 4097

and for the masochists amongst you:

4 Convert $A01E to binary

Well, that's enough agony for now, sorry about the tough bit, there isn't any more Next time we'll get down to the architecture of the 65xx series and start writing code

I've mentioned one or two products worth considering when deciding on what assembler etc you need To help you in your endeavours here are some names and addresses for further information

Supersoft, Winchester House,
Canning Rd, Wealdstone,
Harrow HA3 7SJ

First Publishing, Unit 20B,
Horseshoe Park, Pangbourne,
Berks

Programming the 6502, Rodney Zaks, Sybex Inc ISBN 0-89588-046-6

SHUFFLE

Getting from A-Z is not quite as easy as ABC in this alphabet brainteaser for the C64 by Michael Pendry

This is a simple version of the familiar sliding block puzzle. The object of the game is to rearrange the letters of the alphabet until they travel from A to Z as shown below

A B C D E F G H I
J K L M N O P Q R
S T U V W X Y Z

This is achieved by sliding one of the squares into the empty space. It may sound easy but, as I'm sure many people know, it can be quite tricky. When you think the puzzle is solved, pressing F1 checks to see if you are correct and informs you which letter is incorrect if you are wrong

Pressing Q quits the game and informs you how many movs you heve taken and how long you have been playing. Pressing R redraws the grid and sets up the letters as they were at the beginning. Pressing M randomly mixes up all the letters of the grid.

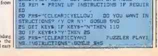
The program is fully documented and includes full playing instructions. Control is via a joystick in port one, but the following keys can be used 1 — up, left arrow — down, CTRL — left, 2 — right, space bar — fire

How it works

10-105	instructions
105-140	define sprite and sprite parameters
145-180	check for keypress
165-220	move sprite
225-330	move letter subroutine
335-435	puzzle checking subroutine
440-450	quit routine
455-490	subroutine to mix up puzzle
495-535	subroutine to display grid
540-565	subroutine to print text

Variables

KEYS	key pressed
LOOP	for-next loop variable
TIS	standard time variable
X	sprite horizontal co-ordinate
G	loop variable
L	value of location P
G	loop to count rows
JUMP	control subroutine
CY	loop for column
ROW	randomly chosen row
A	value of letter pointed to by random numbers
LINE	loop to read data
PRS	information text
VIC	lowest address of Vic graphics chip
J	value of joystick port one
Y	sprite vertical co-ordinate
P	screen co-ordinate of letter
TT	value of correct letter
H	loop to count column
DELAY	loop to delay program
RX	loop for row
COLUMN	randomly chosen column
O	value of letter pointed to by loop
LINES	data which is read



```
5 REM • PUZZLER BY MICHAEL FENDRY (1985)
10 POKES3280,0 POKES3281,0 PRINTCHRS(B),
CHRS(142) REM • SET SCPEEN U/C MODE
15 REM • PRINT UP INSTRUCTIONS IF REQUIR
ED
20 PRS-'[CLEAR][YELLOW]   DO YOU WANT IN
STRUCTIONS? (Y OR N)' GOSUB 540
25 GET KEYS IF KEYS-"N"THEN 110
30 IF KEYS<>"Y'THEN 25
35 PRS-"[CLEAR][CYAN]        PUZZLER PLAYI
NG INSTRUCTIONS":GOSUB 545
```

```
40 PR$="[c T][c T][c T][c T][c T][c T][c
 T][c T][c T][c T][c T][c T][c T][c T][c
 T][c T][c T][c T][c T][c T][c T][c T][c
 T][c T][c T][c T][c T][c T]" GOSUB 545
45 PR$="[c 7]USING A JOYSTICK IN PORT ON
E[DOWN]" GOSUB 545
50 PR$="GUIDE A CURSOR AROUND THE[DOWN]"
 GOSUB 545
55 PR$="GRID OVER THE LETTER'S. TO SLIDE
[DOWN]" GOSUB 545
60 PR$="A LETTER INTO THE SPACE, PLACE[D
OWN]" GOSUB 545
65 PR$="THE CURSOR ON TOP OF THE LETTER[
DOWN]" GOSUB 545
70 PR$="AND FIRE. NOW MOVE THE JOYSTICK[
DOWN]" GOSUB 545
75 PR$="IN THE DIRECTION OF THE SPACE.[D
OWN]" GOSUB 545
80 PR$="YOU WILL THEN DRAG THE LETTER WI
TH[DOWN]" GOSUB 545
85 PR$="YOU. PRESS FIRE ONCE AGAIN TO[DO
WN]" GOSUB 545
90 PR$="DROP THE LETTER.[DOWN]" GOSUB 54
5
95 PR$="[c 3]Q = QUIT. R = RESTART  M =
 MIX[DOWN]" GOSUB545
100 PR$="F1 = CHECK IF PUZZLE SOLVED.[DO
WN]" GOSUB 540
105 PR$="[YELLOW]PRESS ANY KEY TO CONTIN
UE.[UP][UP]" GOSUB 545 POKE 198,0 WAIT 1
98,1
110 GOSUB 505 REM * SET UP PLAYING GRID
115 FOR LOOP=12288 TO 12288+64 POKE LOOP
,0 NEXT REM * CLEAR OUT OLD SPRITE DATA
120 FOR LOOP=12288 TO 12288+21 STEP3 POK
E LOOP,255 NEXT REM * DEFINE SPRITE
125 REM * SET UP SPRITE PARAMETERS
130 VIC=53248 POKE VIC,152 POKE VIC+1,82
 POKE 2040,192
135 POKE VIC+21,1:X=152 Y=82 POKE VIC+27
,1 POKE VIC+38,1
140 TI$="000000" REM * SET TIME TO ZERO
145 IF PEEK(197)= 4 THEN 340 REM * CHECK
 TO SEE IF 'F1' HAS BEEN PRESSED
150 IF PEEK(197)= 17 THEN RESTORE GOSUB
505 REM * CHECK FOR 'R' KEYPRESS
155 IF PEEK(197)=62 THEN 445 REM * CHECK
 TO SEE IF 'Q' HAS BEEN PRESSED
160 IF PEEK(197)= 36 THEN GOSUB 460 REM
* CHECK TO SEE IF 'M' HAS BEEN PRESSED
165 J= PEEK(145) IF J=255 THEN 145 REM *
 READ JOYSTICK-PORT ONE
170 REM * CHECK JOYSTICK DIRECTION *
175 REM * UP
180 IF J=254 AND Y>82 THEN FORG=YTOY-8 S
TEP-1 POKE VIC+1,G NEXTG Y=Y-8 GOTO 215
185 REM * DOWN
190 IF J=253 AND Y<98 THEN FOR G=YTOY+8
POKE VIC+1,G NEXT G Y=Y+8 GOTO 215
195 REM * LEFT
200 IF J=251 AND X>152 THEN FOR G=XTOX-8
 STEP-1:POKE VIC,G NEXTG X=X-8 GOTO 215
205 REM * RIGHT
210 IF J=247 AND X<215 THEN FOR G=XTOX+8
 POKE VIC,G NEXT G X=X+8 GOTO 215
215 IF J=239 THEN MOVE=MOVE+1 GOSUB 230
REM * CHECK PRESS OF 'FIRE' BUTTON
220 POKE VIC,X POKE VIC+1,Y GOTO 145 REM
 * MOVE SPRITE ONE
225 REM * CHANGE X & Y SPRITE CORDIN
ATES TO RELATIVE SCREEN POSITION
230 P=1024 + (((Y-50)/8)*40) + ((X-24)/8
) L=PEEK(P)
235 IF L=32 THEN RETURN REM * RETURN TO
MAIN PROGRAM IF ATTEMPT TO MOVE SPACE
240 IF PEEK(145)=239 THEN 240 REM * WAIT
 UNTIL 'FIRE' BUTTON NO LONGER PRESSED
245 REM * DISPLAY INFORMATION OF LETTER
HELD AND MOVE'S TAKEN SO FAR
250 PRINT "[HOME][DOWN][DOWN][DOWN][DOWN
][DOWN][DOWN][DOWN][DOWN][DOWN][CYAN]" T
AB(8) "YOU ARE HOLDING THE LETTER"
255 POKE 1524,L-128 POKE 55796,1 PRINT"[
HOME]"TAB(15)"MOVE'S   "MOVE
260 J=PEEK(145) IF J=255 THEN 260 REM *
WAIT UNTIL JOYSTICK IS MOVED
265 REM * DECIDE JOYSTICK DIRECTION AND
THEN MOVE SPRITE & LETTER
270 REM * UP
275 IFJ=254ANDPEEK(P-40)=32THENPOKEP,32
P=P-40 Y=Y-8 POKEVIC+1,Y POKEP,L GOTO260
280 REM * DOWN
285 IFJ=253ANDPEEK(P+40)=32THENPOKEP,32
P=P+40 Y=Y+8 POKEVIC+1,Y POKEP,L GOTO260
290 REM * LEFT
295 IFJ=251ANDPEEK(P-1)=32THENPOKEP,32 P
=P-1 X=X-8 POKEVIC,X POKEP,L GOTO260
300 REM * RIGHT
305 IFJ=247ANDPEEK(P+1)=32THENPOKEP,32 P
=P+1 X=X+8 POKEVIC,X POKEP,L GOTO260
310 IF J<>239 THEN 260 REM * CHECK IF 'F
IRE' BUTTON BEING PRESSED OR NOT
315 IF PEEK(145)<>255 THEN 315 REM * WAI
T UNTIL 'FIRE' NO LONGER BEING PRESSED
320 REM * REMOVE INFORMATION OF LETTER B
EING HELD THEN RETURN TO MAIN PROGRAM
325 PRINT "[HOME][DOWN][DOWN][DOWN][DOWN
][DOWN][DOWN][DOWN][DOWN][DOWN][CYAN]" T
AB(8)"
330 POKE 1524,32 RETURN
335 REM * CHECK TO SEE IF PUZZLE HAS BEE
N SOLVED
340 TT=1 FOR G=1200 TO 1280 STEP 40 REM
* SET UP LOOP TO COUNT DOWN ROW'S
345 FOR H=0 TO 8 REM * SET UP LOOP TO CO
UNT ALONG COLUMN'S
350 REM * JUMP OVER NEXT INSTRUCTION IF
LAST LETTER BEING CHECKED IS SPACE
355 IF PEEK(G+H)=32 AND G+H=1288 THEN 36
5
360 IF PEEK(G+H)<>TT+128 THEN GOSUB 420
GOTO 145 REM * CHECK IF LETTER IS RIGHT
365 TT=TT+1 NEXT H,G REM * INCREMENT NUM
BER OF LETTER BEING CHECKED & CLOSE LOOP
370 PRINT"[HOME] [RVSON][YELLOW] WELL DO
NE  .YOU'VE SOLVED THE PUZZLE." REM * CO
NGRADULATIONS
375 PRINT"[GREEN][DOWN][DOWN][DOWN][DOWN
][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DO
WN]YOU HAD "MOVE"MOVE'S" REM * INFORM OF
MOVES TAKEN
380 REM * INFORM OF TIME TAKEN BY SPLITT
ING UP THE TIME STRING VARIBLE INTO HMS
385 PRINT"[DOWN][c 7]TIME TAKEN   "MID$(
TI$,1,2)" HOUR'S,"
390 PRINTTAB(13)MID$(TI$,3,2)" MINUTE'S,
"
395 PRINTTAB(13)"AND "MID$(TI$,5,2)" SEC
```

```
OND'S."
400 IF JUMP-1 THEN RETURN REM * CHECK IF
 PART OF SUBROUTINE & RETURN IF SO
405 PRINT"[DOWN][DOWN][DOWN][CYAN]
  PRESS FIRE TO PLAY AGAIN"
410 WAIT 197,60 RUN.REM * WAIT UNTIL FIR
E BUTTON IS PPESSED THEN START AGAIN
415 REM * INFORM PLAYER WHICH LETTER IN
PUZZLE IS IN THE WRONG POSITION
420 PRINT"[HOME][DOWN][DOWN][DOWN][DOWN]
[DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][c 6
]   THE LETTER [WHITE]"CHR$(64+TT)"[YELL
OW] IS IN THE WRONG PLACE!"
425 FOR DELAY-1TO2000 NEXT DELAY REM * D
ELAY PROGRAM TO ALLOW TIME TO READ INFO.
430 PRINT"[HOME][DOWN][DOWN][DOWN][DOWN]
[DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][YEL
LOW]
  "·REM * CLEAR INFO.
436 RETURN REM * RETURN TO PUZZLE CHECKI
NG ROUTINE
440 REM * 'Q'UIT ROUTINE
445 PRINT"[HOME][DOWN][DOWN][YELLOW]" JU
MP-1 GOSUB 375 POKE 198,0.POKE VIC+21,0
REM * PRINT UP INFO
450 END REM * PROGRAM END'S
455 REM * RANDOMLY MIX UP PUZZLE
460 FOR CY-0 TO 2 FOR RX-0 TO 8 REM * SE
T UP LOOP FOR EACH LETTER
465 ROW - INT(RND(1)*2) COLUMN - INT(RND
(1)*8) REM * CHOSE A RANDOM POSITION
470 A -PEEK(1200+(ROW*40)+COLUMN) REM *
 USE RANDOM NUMBERS TO CHOSE POSITION
475 B -PEEK(1200+(CY*40)+RX) REM * CHOSE
  LETTER POINTED TO BY LOOP
480 POKE1200+(ROW*40)+COLUMN,B POKE1200+
(CY*40)+RX,A REM * SWAP VALUE'S OF A & B
485 X-152+(RX*8) POKE VIC,X Y-82+(CY*8)
POKE VIC+1,Y.NEXT RX,CY REM * CLOSE LOOP
490 RETURN REM * RETURN TO MAIN PROGRAM
495 REM * ROUTINE TO SET UP PLAYING GRID
500 REM * READ THE DATA TO BE PPINTED ON
 THE SCREEN
505 PRINT "[CLEAR][DOWN][DOWN]" FOR LINE
-1 TO 5 READ LINE$ PRINT TAB(15) LINE$ N
EXT LINE
510 PRINT"[DOWN][DOWN][DOWN][DOWN][DOWN]
[DOWN][DOWN][DOWN][DOWN][DOWN][PUPPLE]"T
AB(14)"P U Z Z L E R" RETURN REM * PRINT
 TITLE & RETURN
515 DATA"[YELLOW][c A][s *][s *][s *][s
*][s *][s *][s *][s *][s *][c S]"
520 DATA"[s -][GREEN][RVSON]ZYXWVUTSR[RV
SOFF][YELLOW][s -]"
525 DATA"[s -][GREEN][RVSON]QPONMLKJI[RV
SOFF][YELLOW][s -]"
530 DATA"[s -][GREEN][RVSON]HGFEDCBA[RVS
OFF] [YELLOW][s -]"
535 DATA'[c Z][s *][s *][s *][s *][s *][
s *][s *][s *][s *][c X]"
540 REM * ROUTINE TO PRINT UP TEXT
545 PRINT TAB((40-LEN(PR$))/2), REM * CE
NTRE TEXT
550 FOR LOOP=1  TO LEN(PR$) REM * SET UP
 LOOP TO READ THROUGH PR$
555 PRINT MID$(PR$,LOOP,1), REM * PRINT
LETTER POINTED TO BY VAPIABLE LOOP
560 FOR DELAY-1 TO 40 NEXT DELAY REM *
DELAY PROGPAM
565 NEXT LOOP PRINT RETURN REM *   CLOSE
 LOOP AND RETURN
640 REM * DID YOU ENJOY 'ALL THAT TYPING?
```

GOOD BYTE

SPECTRUM

[illegible]

AMSTRAD

[illegible]

COMMODORE 64

[illegible]

ALL PRICES INCLUDE P&P

[illegible]

Unitsoft

UNIT 5 (Dept. D)
136 INGRAM ST
GLASGOW G1 1EJ

Underwurlde 7.50
Sabre Wulf 7.50
Elite Cass 11.20
Elite Disc 15.95
Skyfox Cass 7.50
Skyfox Disc 8.70
Tour/France 7.50
ST Road Race 7.50
Rescue/Fractalus 7.50
On Field Football 7.50
On Court Tennis 7.50
Barry McGuigan 7.50
Music Studio 11.20
Frank Ghost 6.95
Scooby Disc 6.95
New Darach 8.70
Mercenary 7.50
Spy's Demise 7.50
Blue Max 2001 7.50
Hypersports 6.95
F G T H 7.50
Nodes of Yesod 7.50
Exploding Fist 7.50
Starion 6.70
Terrormolinos 6.95
Kennedy Approach 7.50
Summer Games II 7.50
Ghost Chaser 7.50
Pitstop II 7.50
Impos. Mission 7.50
Whirlinurd 7.50
Doughboy 7.50
Beach Head II 7.20
Speedking 7.50
Thing On a Spring 6.95
[illegible] Open 7.50
Theatre Europe 7.50
Entombed 7.50
Blackwyche 7.50
Karateka 7.00
Dr Creep Castles 7.00
[illegible] 7.50
Evil Crown 7.50
Super Zaxxon 7.50
Cauldron 6.95
Rupert/Toymakers 7.50
Brit National 7.00
Paranoid
Race Destruct. Set 6.80
Disc 11.20
Music Const. Set
Disk 11.20
Pinball Con. Set Disc 11.20
Mail Order Monst. Disc 11.20

7/Cities (disc) 11.00
Wizardry 7.50
Cylu 1.00
Spy vs Spy 7.00
Wizard's Lair 6.95
Rocco 6.95
View To A Kill 8.20
Buck Rogers 6.80
Rocky Horror 6.70
Tir Na Nog 7.50
[illegible] 6.95

SPECTRUM
Fairlight 7.00
Exploding Fist 6.70
Nodes of Yesod 7.00
Starion 5.95
Southern Belle 6.95
[illegible] 5.80
Now Games 6.70
Terrormolinos 6.95
F/Warrior 6.70
F G T H 7.50
D T Super Test 6.20
Hypersports 6.95
W/Series B/Ball 6.90
Spy Hunter 6.95
Frank Bruno 6.20
The Artist 8.70
Nightshade 7.50
[illegible] 7.50
Scooby Doo 6.20
[illegible] 6.95
Underwurlde 7.50
Cauldron 6.95
Never ending 7.50
Evil Crown 7.50
J.S.W. II 6.80
Dynamite Dan 6.80
[illegible] 6.95
Dun Darach 7.50
Grand National 5.20
[illegible] 6.95
Red Arrows 8.70
On The Run 6.70
[illegible] 8.70
Cylu 1.00
Code/Mat II 6.70
Rupert/Toymakers 6.95
Leonardo 6.20
Robin/Sherwood 7.50
Rockford's Riot 7.50
Shadow/Unicorn 11.20
Popeye 6.80
[illegible] 7.50
Dambusters 7.00
Bored/Rings 6.20
Shadowfire 7.50
High/Encounter 6.95
Monty/Run 6.20

Spy vs Spy 7.00
Robin of Woods 7.00

AMSTRAD
Exploding Fist 7.00
3D Starstrike 6.20
Starion 7.00
Mordons Quest 6.20
The Hobbit 11.20
Sir Lancelot 6.95
Robin/Sherwood 7.50
Master/Lamps 7.50
Ghostbusters 8.20
Sorcery 8.70
Alien 8 7.50
Knight Lore 7.50
[illegible] 7.00
Code/Mat II 7.00
Dun Darach 7.00
Project Future 8.70
[illegible] 6.80
View To A Kill 8.25
Tank Buster 5.50
Frank Ghost 6.70
[illegible] 5.95
Ring/Darkness 7.00
Red Arrows 7.00
Rocco 8.70
Hard Hat Mack 7.00
Boulder Dash 7.00

ATARI
Boulder Dash 7.00
Whirlinurd 7.00
Chop Suey 8.70
Spy's Demise 7.00
Snokie 7.50
Chop Suey Disk 8.70
Dropzone 7.00
[illegible] 7.50
[illegible] Commander 7.20
[illegible] 7.00
[illegible] Disc 8.70
7 City/Gold D 11.20
Pinball Con. D 11.20
[illegible] Con. D 11.20
Ghost Chaser 7.00
Strip Poker 7.00
[illegible] 7.00
[illegible] 7.00
Archon 7.00
M.U.L.E. 7.00
Gt. Road Race D 11.20
Res./Fractalus 7.00
Up and down 7.00

PERIPHERALS
Quickshot I 6.95
Joycard 5.95
Datex M/Mike 9.95
JY2 Stick AMS 7.00
Pinball Int 10.50

Please block name address and order clearly. Postage included UK. Overseas orders add £1.00 per game. All cheques made to UNITSOFT

AMSTRAD UTILITY

GAME FOR A GRAPH

3-D graphs are within your grasp with this Amstrad utility by M Peochey

This program allows the user to quickly produce attractive three dimensional bar charts, or histograms as they are also called, simply by providing a label for each bar and an associated value

Up to twelve bars can be produced and values between 1 and 9,900 can be drawn Automatic scaling adjusts the scale so that the full height of the screen is always used. For a maximum value above 990 the scale value is multiplied by a factor of ten in order that the scale labels do not exceed three digits.

Values are rounded to the nearest 1/20th of the scale maximum value and plotted accordingly Bar labels are similarly limited to three characters to ensure clarity of presentation.

The table of labels and values could usefully be printed to a line printer for permanent record, using the characters and values contained in the two arrays label$ and valuecomp. With the addition of a screen dump routine, the bar chart itself could be printed

Note A REM should be temporarily inserted in line 50 before ON ERROR GOTO 1000 so that you can pin point any typographical errors.

How it works

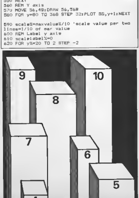
100-210	input and validation routines to determine graph parameters
220-250	establishes scale according to maximum value and rounds to nearest 10
260-370	input label and value for each bar and validate
390-470	clear screen and print title
480-580	draw X axis according to number of bars
	draw Y axis and plot scale markers
590-660	plot scale label every two lines for twenty lines
670-800	draw bars to scale height. Test for bottom and top of bar using yflag to determine correct printing characters
1000-1010	trap error caused by numbers entered being too high for integer variables to handle
2000-2310	sub routine to provide editing option
2010-2110	prints table of labels and values entered
2120-2220	allows existing labels to be changed by accessing a particular element of the string array label$(n)
2230-2310	allows existing values to be changed by accessing a particular element of the array valcomp(n)

Variables

title$	the title of the graph
component%	number of bars to be drawn
maxvalue%	maximum value the graph is to draw, rounded up to nearest 10
scaleflag%	when set indicates the maximum value to be drawn is above 990. For this condition, maxvalue% is scaled down by a factor of 10
label$(n)	string array to hold the label for each bar
valcomp(n)	array to hold the value for each bar
scale%	holds one tenth of the maximum value or the maximum value if scaleflag% set
scalelabel%	uses scale% to compute the y axis values for every two lines of the screen area used
ylines%	the number of screen lines to be used per bar
barheight%	uses ylines% to determine the height of each bar. The greater the value of ylines% the lower the screen line value of barheight%
e%	loop variable used by LOCATE to position each bar along the x axis
h%	loop variable used by LOCATE to print each bar up to barheight%
yflag	set for each h% loop according to whether each bar in turn is at base (=1), intermediate (=0) or maximum (=2) height. This determines appropriate bar printing characters

```
10 REM GRAPHIT-main program
20 REM
30 ZONE 10
40 DIM label$(12),valcomp(12)
50 ON ERROR GOTO 1000
60 MODE 1
70 BORDER 26:PEN 1:PEN 2:PEN 3
80 INK 0,26:INK 1,6:INK 2,0:INK 3,18
90 PEN 2
100 PRINT"      BAR CHART GENERATOR":PRINT:P
RINT:PRINT
110 LOCATE 1,5
120 LINE INPUT"Title please ";title$:PRINT:PR
INT
130 IF LEN( title$) >20 THEN PRINT"Too long'
:GOTO 110
140 LOCATE 1,8
150 INPUT"How many components";component%
160 IF component% >12 THEN PRINT"Maximum is t
welve" :GOTO 140
170 IF component%<1 THEN GOTO 140
180 LOCATE 1,12
190 INPUT"What is the maximum value";maxvalue
%
200 IF maxvalue%>9900 THEN PRINT"Value too hi
gh'':GOTO 180
210 IF maxvalue%<10 THEN PRINT"Value too low'
 :GOTO 180
220 IF maxvalue%<=990 THEN maxvalue%=(maxvalu
e%+4)/10:maxvalue%=maxvalue%*10:scaleflag%=0:
GOTO 260 'round up max.value to nearest 10

230 REM convert max val above 990 to nearest
10 using 1/10th scale labelling
240 maxvalue%=(maxvalue%+49)/100:maxvalue%=ma
xvalue%*10
250 scaleflag%=1
260 REM Label and value components
270 FOR c%=1 TO component%
280 CLS:PRINT" Label each component(max.3 ch
aracters)":PRINT:PRINT
290 LOCATE 1,10
300 PRINT"Component number c%' label please
;
310 INPUT;label$(c%)
320 IF LEN (label$(c%))>3 THEN 280
325 LOCATE 1,13:PRINT SPC(39):LOCATE 1,13

330 INPUT;"Value please ";valcomp(c%)
340 IF scaleflag%=1 AND valcomp(c%)>maxvalue%
*10 GOTO 325
350 IF scaleflag%=0 AND valcomp(c%)>maxvalue%
 GOTO 325
360 IF valcomp(c%)<0 GOTO 325
370 NEXT
380 GOSUB 2000
390 REM Title
```

```
430 CLS:BORDER 0
431 LOCATE 5,10
435 PRINT"To quit Graph press any key"
437 FOR x=1 TO 1500:NEXT
438 CLS
440 PEN 1
450 IF scaleflag%=1 THEN LOCATE 4,1:PRINT"x10
"
460 LOCATE 12,2
470 PRINT"***'UPPER$(title$)'***"
480 REM Scale and Draw
490 REM X axis
500 FOR x%=1 TO component%
510 MOVE 56,47:DRAW(component%*48+64),47,2

520 REM Label x axis
530 LOCATE (x%*3+2),25
540 PRINT label$(x%);
550 NEXT
560 REM Y axis
570 MOVE 56,48:DRAW 56,368
580 FOR y=80 TO 368 STEP 32:PLOT 55,y+1:NEXT

590 scale%=maxvalue%/10 'scale value per two
lines=1/10 of max value
600 REM Label y axis
610 scalelabel%=0
620 FOR y%=20 TO 2 STEP -2
```



```
630 scalelabel%=scalelabel%+scale%
640 LOCATE 1,y%
650 PRINT USING"###";scalelabel%
660 NEXT
670 REM Draw Bars
680 PEN 3
690 FOR c%=1 TO component%
700 IF scaleflag%=1 THEN scale%=maxvalue%'NB m
axvalue has already been reduced by1/10th '
710 ylines%=valcomp(c%)/(scale%/2)' scale per
1 line
720 barheight%=(22-ylines%)+1
730   FOR h%=22 TO barheight% STEP-1
740   IF h%=22 THEN yflag=1 ELSE yflag=0
750   IF h%=barheight% THEN yflag=2
760   LOCATE (c%*3+2),h%
770   IF yflag=2 THEN PRINT CHR$(143);CHR$(14
3);CHR$(223);GOTO 790
780   IF yflag=1 THEN PRINT CHR$(143);CHR$(14
3);CHR$(220) ELSE PRINT CHR$(143);CHR$(143);C
HR$(207)
790   NEXT
800 NEXT
810 a$=INKEY$:IF a$="" GOTO 810
820 PEN 2
830 CLS:LOCATE 10,12:PRINT"Finished(Y/N)?"
840 a$=INKEY$:IF a$="" GOTO 840
850 IF a$="y" OR a$="Y" GOTO 60 ELSE GOTO 380
1000 PRINT"The value just entered is too high
     try again please":PRINT
1010 RESUME
2000 REM TABLE and EDITING subroutine
2010 CLS:BORDER 26:PEN#1,2
2020 WINDOW#1,10,40,1,13
2030 PAPER#1,3:CLS#1
2040 PRINT#1,"Component Label      Value"
2050 FOR c%=1 TO component%
2060 PRINT#1,c%,label$(c%),valcomp(c%)
2070 NEXT
2080 PEN 2:LOCATE 5,17
2090 PRINT"Do you want to amend(Y/N)?"
2100 a$=INKEY$:IF a$="" GOTO 2100
2110 IF a$="n" OR a$="N" THEN RETURN
2120 REM edit label
2130 LOCATE 5,17:PRINT SPC(35):LOCATE 5,17
2140 INPUT"Which component No. please";number
%
2150 IF number% 1 OR number% >component%  GO
TO 2130
2160 LOCATE 5,17:PRINT SPC(36):LOCATE 5,17
2170 PRINT"Do you wish to amend the Label(Y/N
)?"
2180 a$=INKEY$:IF a$="" GOTO 2180
2190 IF a$="n" OR a$="N" GOTO 2230
2200 LOCATE 5,17:PRINT SPC(36):LOCATE 5,17
2210 INPUT"What is the new Label";label$(numb
er%)
2220 IF LEN(label$(number%)) >3 GOTO 2200
2230 REM edit value
2240 LOCATE 5,17:PRINT SPC(36):LOCATE 5,17
2250 PRINT"Do you wish to amend the Value(Y/N
)"
2260 a$=INKEY$:IF a$="" GOTO 2260
2270 IF a$="n" OR a$="N" GOTO 2000
2280 LOCATE 5,17:PRINT SPC(36):LOCATE 5,17
2290 INPUT"What is the new Value";valcomp(num
ber%)
2300 IF valcomp(number%)<0 OR valcomp(number%
)>maxvalue% GOTO 2280
2310 RETURN
```

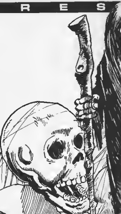
GO
MONTY ON THE RUN
MONTY ON THE RUN
GO STRAIGHT ROUND TO YOUR SOFTWARE DEALER – MONTY ON THE RUN
ON SALE OCTOBER 25th – THE RACE IS ON TO GET YOURS BEFORE THEY ALL GO!!!

Super fit and desperate for freedom Monty makes his daring escape from Scudmore Prison. With the help of the criminal underworld he must collect the five correct elements of his freedom kit including the gold coins that will make him a mole of leisure.

At last he's free but can he make the cross channel ferry

Gremlin Graphics Alpha House 10 Carver Street, Sheffield S1 4FS Tel: (0742) 753423

VENTURES



Peter Sweasey has gone rather lunatic with the release of Level 9's Red Moon but we still have him giving advice in exchange for a dried crust, so send your problems to his dungeon

Before the annual rush of releases for the autumn, I have two major releases to deal with down here in the dramatic Argus Press dungeons Robin Of Sherwood, new from Adventure International, will be reviewed next time

But first, the latest from the premier British adventure house, Level 9 Red Moon has some interesting new features, and also marks Level 9's return to middle earth, after brief excursions in the world of science fiction People have noted in the past that a new Level 9 game is always cause for celebration, and to help the parties along this time, I was sent some moon shaped red balloons along with my review tapes Thanks, they brighten up the dungeon no end! (I'll put a stop to this, Ed)

When the world was new, and time didn't exist, magik still worked and magicians were omnipotent The magik was powered by the moon, then crimson red and as bright as the sun Sadly, during eclipses, fierce battles raged in space, and eventually these took their toll on the moon, which lost its colour and most of its power

Eventually it became so weak that all the magicians' cloud castles fell from the air (which naturally didn't do the magicians much good) The surviving magicians somehow made a "Red Moon Crystal" to enable magik to be practised, although only on the island of Baskalos was its power strong enough Even this stronghold of civilisation is threatened when the crystal is stolen Your task is to retrieve it

This delightful scenario sets up an atmosphere superbly This being one of Level 9's cheaper adventures, the box is smaller and you aren't given the usual book The instructions on the inlay are adequate though, and the cover artwork is superb What of the game itself, I hear you cry .

You start on a grassy plain, near a volcano Before long you discover the two other main game areas the castle of Cakabol, where the moon crystal is hidden in a network of treasure vaults, and an extensive cave network, reached by going down a pothole I mentioned Red Moon differs from previous L9 games, and it does this in two important ways

Firstly, it is possible to east spells, providing you are carrying a suitable object Spells include FIND, which takes your mind's eye to the location of a named object, TREASURE and MAGIC, which help determine the value and use of objects found, ZAP, to attack, and other spells to increase strength or ward off attacks for a while

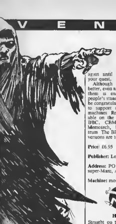
The other new feature is the use of combat linked to strength Fights are measured in 'hit points' — you start with fifty — and depending on the weapons used and your opponent's strength, fights can be quick and effortless or long and fatal

Descriptions are as long as always, and show plenty of humour My favourite was this one "You are in a cabinet of dead wood (traditional material for cabinets) Crumpled olive leaves, or 'olivetti', are mingled with assorted woodland refuse on the floor". Typing EXAMINE LEAVES brings "Well preserved. You find an acorn " Acorn buried under olivetti? Naughty

EXAMINE is a joy to use and enhances the game considerably Further examination of the acorn responds "Carved with a picture of a bridge " Look more closely at Drellap the Troll and you'll find he is "ten foot tall, blue grey skin Even its eyelids ripple with solid muscle " Sounds more like our editor (No food for you this month, Ed)

The graphics are, unfortunately, no match for the test On my CBM 64 version they are just above average, but on the Spectrum they are terrible, really blotchy They are also too repetitive for my liking, although I suppose a cave network would tend to look all the same Fortunately, they can be turned off

Its vocabulary is also disap-



pointing, considering L9's good track record in this area. No full sentence input, you have to use very basic, three word phrases Not as much as usual is understood, and the responses weren't as friendly as I expected One really niggling fault is you cannot TALK to the characters who inhabit the game Perhaps this is acceptable considering the lower price, but a shame nonetheless

One other gripe Red Moon bears a sometimes startling resemblance to Colossal Adventure Common objects include rare spices, silver bars, coins and an axe Plus there are familiar descriptions of long low rooms, low crawls, the volcano, and the maze of tiny passages This could be some form of in joke, or a tribute, but it does give you an odd feeling of having seen it all before

Initial impressions are that this is easier than most Level 9, although my rating is currently only wingeing nacod It lacks the polish of Return To Eden Nevertheless, for the price it is unsurpassable value for money Like all their games, you are instantly drawn into a fantasy world, and don't want to leave again until you have solved your quest.

Although Level 9 can do better, even an average game by them is excellent by other people's standards They are to be congratulated for continuing to support a wide range of machines Red Moon is available on the Amstrad, Ataris, BBC, CBM64, Enterprise, Memotech, MSX and Spectrum The BBC and Memotech versions are text only

Price £6 95

Publisher: Level 9

Address: PO Box 39, Weston-super-Mare, Avon BS24 9UR

Machine: most

Helpline

Straight on to your adventure problems starting with Hewson's popular Fantasia Diamond Ian Recro of Gateshead is having problems at the beginning He says he "can't open the manhole or cross the river". Well, you can't cross the river until much later in the game, on your way back Ask the robot to open the manhole — but make sure there is a battery inside it first Meanwhile, further in the game, A Oxley from Cleveland is stuck in the dark cellar You need to RUB GLASS, according to Fantasia Diamond expert Brian Cousin

Brian is himself finding difficulties with Adventure International's wonderful Gremlins He thinks he's near the end, but cannot cause any kind of explosion Firstly, you need to POST a lit flashlight in the mailbox, which will enable you to cut it into plates with the welding torch These can be welded over — well, I'm sure you can guess Once you have trapped the gremlins (the solution is different, by the way, from the film), you will need to use the drill in the hardware department More hints next time

Adrian Ward from Mansfield cannot remove the curse in Scott Adam's Voodoo Castle Listen to what the medium says about a good luck charm, think about the doll

T J Avery keeps getting blown up in the great end game of Level 9's Colossal Adventure Although he has rescued all three sets of elves, the water reaches the lava before he can escape the caves You need to go to the spiral stairs, and lock the heavy dungeon door with the bunch of keys Make sure you work quickly, or you will be killed before you can get such protection

Still on the subject of Colossal, it's time for maze corner To find the orange column in the maze of alike passages, you need to go S,E,S,S,S,N,E Then, providing you have been robbed, go E and NW to the pirate's chest In the Level 9 end game, go E then D from the top of the iron ladder

Some quick Red Moon hints next To find the medallion, one of the treasures, enter the tiny tunnels by going north from the guardian's cave, then go NW twice To go to the great hall, go SE, SE, W, SE Or to go to the bronze stairs, go NE then NW Treasures have to be dropped on the grassy plain at the start — I think, I haven't checked this thoroughly yet Sword too hot to handle? Leather gloves may be the solution The bushes by the folly could do with examination — drop the handle in something nearby perhaps And remember, magik doesn't work when iron is nearby

Paul and Glenn Gibney from County Antrim sent me a complimentary letter (always much appreciated) and a useful Subsunk map So far they have completed The Hobbit, Colditz, Valkyrie 17 and Subsunk, and have just started Artic's fiendish Eye of Bain Belated happy birthday to Glenn by the way, who was eleven in August

Justin Langan of Argyll needs help with Erik The Viking Ventures regular John Rundle helps him get the feather and yellow ribbon Al Kwasarmi has the ribbon, but you need to give him sinews of a bear (from the stewpot), the breath of a fish (fill the flask with the dolphin's breath), bird's spittle (take the spittoon to the eagle), roots of a mountain (plant stone fruit, water with mineral water) and the beard of a woman (shave dwarves with clippers)

To get the feather from the dragon's nose, you need to go IN and take it There is a random element though, which may cause the dragon to sneeze and throw Erik back to the deck Once taken, the dragon will give you a whistle Blow this and the dragon will help you, but it only works once

That's all I have space for more next time Remember, I can help with your adventure problems, and try to give a personal reply Happy venturing!

Game Name ______________________

Company. ______________________

Problem: ______________________

____

____

Hints: ______________________

____

____

Machine owned ______________________

Name ______________________

Address· ______________________

____

____

Micronet Mailbox: ______________________

DON'T INTERRUPT

DO NOT DISTURB!

In this follow-up to his game writing series Dave Ellis gives advice and examples of the use of interrupts from BASIC

Interrupts are used extensively in games programs. The interrupt routine is usually concerned with updating some feature of the game In KNIGHT LORE for example, the rising and setting sun is a typical candidate for an interrupt routine In SORCERY, the 'crumbling book' is another example Up until the AMSTRAD, all interrupt programming had to be written in machine code — definitely not for the faint hearted!

The Amstrad machines are able to generate interrupts directly from BASIC, which means that anyone can now manage to use interrupt routines They can still be written in machine code if need be, and some useful firmware routines are provided which help to make the writing of the interrupts in machine code a lot simpler. However, for this article I shall just be looking at interrupts from BASIC Machine code interrupts will be looked at in a later article

There are five BASIC commands associated with interrupts These are —

1 — AFTER
2 — EVERY
3 — REMAIN
4 — DI
5 — EI

AFTER

This command will call an interrupt routine "after" a predetermined time The interrupt routine will only be called once. So if you said
AFTER 200,0 GOSUB 1000
the subroutine starting at line 1000 will be called after 4 seconds The value 200 is the time in 1/50ths of a second, the zero refers to the priority of the interrupt, which will be looked at shortly

EVERY

This command will call an interrupt subroutine at regular intervals as stated in the command line So.
EVERY 200,0 GOSUB 1000
will call the subroutine 'every' 4 seconds The interrupt subroutines should be kept fairly short, otherwise they may be interrupted by another interrupt This can be avoided by using the DI and EI commands.

DI

This stands for Disable Interrupts It should be placed at the beginning of the interrupt subroutine. Higher priority interrupts will now be disabled

EI

This stands for Enable Interrupts As you may have guessed, this is placed at the end of the interrupt subroutine and allows other interrupts to now take place again

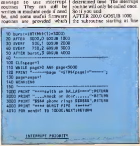
REMAIN

This command will return the time remaining for one of the interrupts generated by the AFTER command It will also disable the interrupt, which is a useful way of clearing the interrupt if it is no longer needed

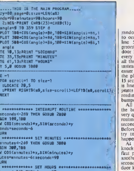
To get a feel for these various operations I shall use a typical day in the life of ... well, just about anyone!

Let's imagine that you've just settled down to read the latest copy of HCW after a hard days work (this activity is the 'main program') Must remember to switch the telly on for the first episode of DALLAS Is Bobby really dead?! It starts at 8 00pm, thats in 60 minutes time So, set the countdown timer on your watch (AFTER 180000,0 GOSUB 'DALLAS')

Just after you've read a few pages, the first interrupt happens There is a knock on the door It's your friendly 'you know who' trying to sell you the latest 'you know what' This seems to happen about every 10 minutes at my house, so . EVERY 30000,1 GOSUB 'DOOR KNOCK' This also seems to happen with the telephone, which rings about every



```
10 burst=INT(RND(1)*3000)
20 AFTER  3000,0 GOSUB 1000
30 EVERY   500,1 GOSUB 2000
40 EVERY   750,2 GOSUB 3000
50 AFTER burst,3 GOSUB 4000
40 '-------------------------------------
100 CLS:page=1
110 WHILE page>0 AND page<5000
120 PRINT "------page "+STR$(page)+"-----";
130 page=page+1
140 WEND:END
150 '-------------------------------------
1000 PRINT "====swith on DALLAS====":RETURN
2000 PRINT "....knock on door......":RETURN
3000 PRINT "$$$$ phone rings $$$$$$":RETURN
4000 PRINT "**** BURST PIPE  ******"
4010 FOR mens=1 TO 10000:NEXT:RETURN


      INTERRUPT PRIORITY
```



```
100 m$=".....THIS IS THE MAIN PROGRAM....."
110 x=80:y=80 page=0:size=LEN(m$)
120 seconds=90:minutes=90:hours=90
130 MODE 2:DEG:PRINT CHR$(23)+CHR$(1);
140 FOR angle=0 TO 359 STEP 6
150    :PLOT 100+COS(angle)*86,100+SIN(angle)*86,1
160    :PLOT 300+COS(angle)*86,100+SIN(angle)*86,1
170    :PLOT 500+COS(angle)*86,100+SIN(angle)*86,1
180 NEXT angle
190 LOCATE 10,13:PRINT "SECONDS"
200 LOCATE 35,13:PRINT "MINUTES"
210 LOCATE 61,13:PRINT "HOURS"
220 EVERY 5,0 GOSUB 1000
230 '------------------------------------------------
240 WHILE -1
250    :FOR scroll=1 TO size-1
260      :LOCATE 20,5
270      :PRINT RIGHT$(m$,size-scroll)+LEFT$(m$,scroll);
280    :NEXT
290 WEND
300 '------------------------------------------------
1000 REM ************* INTERRUPT ROUTINE *************
1010 IF seconds<-269 THEN GOSUB 2000
1020 ORIGIN 100,100
1030 DRAW COS(seconds)*x,SIN(seconds)*y
1040 seconds=seconds-6
1050 RETURN
2000 REM ************* SET MINUTES *******************
2010 IF minutes<-269 THEN GOSUB 3000
2020 ORIGIN 300,100
2030 DRAW COS(minutes)*x,SIN(minutes)*y
2040 minutes=minutes-6:seconds=90
2050 RETURN
3000 REM ************* SET HOURS *********************
3010 IF hours<-269 THEN hours=90
3020 ORIGIN 500,100
3030 DRAW COS(hours)*x,SIN(hours)*y
3040 hours=hours-30:minutes=90
3050 RETURN
```

INTERRUPT CLOCK

15 minutes so EVERY 45000,2 GOSUB 'PHONE-RING'

As if all these interruptions were not enough, have you repaired that dodgy water pipe yet? You have been warned . . . AFTER ?????,3 GOSUB BURST-PIPE.

Now if everything goes smoothly, all these interruptions will occur one at a time. But what if the phone rings when you are chatting to the door 'salesman'? For most of us it's a darn good excuse to get rid of him (or her), but the persistent ones will hang on while you answer the phone. So interrupt 1 (the salesman), has been interrupted by interrupt 2 (the phone). After you have finished on the phone you will resume interrupt 1 from where you left off — not at the beginning ie. the salesman will not bother to knock at the door, although in my own case he would probably have to, as I tend to 'forget' that they are there.

If interrupt 3 should occur (the burst pipe), it's obvious that this is a crisis, and regardless of which interrupt you are dealing with, fixing the pipe will have to take precedence over all others. In this example then, the priorities have been placed in the order

BURST PIPE (priority 3)
PHONE RING (priority 2)
DOOR KNOCK (priority 1)
DALLAS (priority 0)

Of course, you may place your priorities in a different order. DALLAS might be your top priority, and not even a burst pipe could drag you away (my sister for example!)

You may decide that your salesman needs your undivided attention, and so all other interrupts will have to be disabled. This will mean repairing the pipe before it bursts, taking the phone off the hook, and silencing the alarm on your watch.

To see how all this works, enter the program INTERRUPT PRIORITY. This sets up the events in the order that we have just seen. Line 10 sets a random time for the burst pipe to occur, which is then set by line 50, and is the highest priority (3). Line 20 sets the door knock interrupt to occur every 10 seconds. I have scaled all the times down to seconds instead of minutes so that it is easier to follow. Line 40 calls the phone ring interrupt every 15 seconds. The main program is lines 100 to 140, which just prints out what page you are reading. With 5000 pages it's a bumper edition of HCW!

All the interrupts apart from the burst pipe are dealt with very quickly, but the burst pipe routine has a delay of 10 seconds whilst it is mended. Before running the program, try to fathom out what will happen.

At 10 seconds the first door knock occurs. At 15 seconds the first phone rings, followed by another door knock at 20 seconds. At 30 seconds both the door knock and phone ring will occur. According to our priority order the phone should be attended to first. Does this happen in the program?

This order will repeat itself until at 60 seconds when all three interrupts will occur ie. DALLAS,door,phone. The priority order should be phone, door,DALLAS. Check to see if this is correct. Of course, the burst pipe may occur at any time. When it does, everything will halt for 10 seconds whilst it gets mended. If any interrupts are due to occur during this time, they will be placed onto a queue (in priority order) and serviced once the pipe has been mended. You will see all this more clearly if you use a stopwatch to time the events.

When you have satisfied yourself that the interrupts are working as predicted, try altering the priority of some of them. Try changing the priority of the burst pipe to 0, and DALLAS to 3 and see what happens. If you want to override the higher priority interrupts now, in order to mend the pipe, then you will have to use DI and EI in subroutine 4000. If you want to see how much time is left before you switch on DALLAS then try PRINT REMAIN(0), assuming that it is set to interrupt priority 0. Remember that this will also clear the interrupt and so it will not take place.

For a more useful example of using an interrupt routine try typing out the program INTERRUPT CLOCK. This uses an interrupt routine to draw the second,minute, and hour hands seperately. The time has been scaled down by a factor of ten so that you can see the results of the program without having to wait 12 hours to go full circle!

To set the time so that the routine is called once a second, change line 220 to EVERY 50,0 GOSUB 1000 and the clock will run to the correct time now. The program is as follows.

Line 110 sets the size of the lines to be drawn, given by the x and y values. Line 120 sets the seconds, minutes, and hours to 90. This is the angle of the lines — 90 degrees is straight up which corresponds to the 12 o'clock position of a watch. Line 130 sets degrees (DEG) followed by the graphics ink mode. In this case CHR$(1) is XOR. Lines 140-180 plot the outer points for the three clock faces. Line 220 sets up the interrupts routine to be called every 1/10th second. The interrupt is set to the lowest priority (0), although as it is the only interrupt the zero could be left out if you wish. Lines 230 290 are the main program. You could have whatever program you like running here. In this case it's just a simple program you like running here. In this case it's just a simple program to scroll the message " THIS IS THE MAIN PROGRAM " across the screen. Note how this is achieved simply by manipulating the string in a loop. This is similar to the scrolling messages on the new 6128 Amstrad, although being in BASIC the movement is rather more jerky than the beautiful smooth scrolling produced by the machine code CP/M version.

The interrupt routine itself starts at line 1000. The lines are drawn using the same geometry as shown in the third article of the series. As the graphics mode is XOR, the lines will first be drawn, and then erased the second time round. RUN the program and you will see more clearly what I mean.

If you set the lock to regular time you will find that it keeps very good time.

In the next article I shall take a brief look at Amstrad's way of handling interrupts from machine code. There will be a useful utility to give you a visual display of the state of the Caps Lock key.

BOOGIE BUGGY

Ian Waugh was one of the first in this country to try Siel's Sound Buggy, here are his thoughts and comments...

Music and computers are no longer strangers but in-built sound chips do have limitations. Yes, even Commodore's SID chip which clever programmers have coaxed into speech can appear lacking if you want to add a drum, bass and chord accompaniment to a tune.

Enter Siel's Sound Buggy. Packaged in a tidy grey box, it contains its own synthesiser, making it completely independent of SID. It enables you to play and record the melody line of a song and areange an accompaniment for it. A phono and a mini jack socket provide outputs to a hi fi unit or headphones.

Control of the program is through a series of menus and movement around the screen is with the function keys. The CMDR key causes a Help message to pop up at the top of the screen and you can choose the language in which you want the messages to appear, English, French, German or Italian. I decided not to find out if I was multi-lingual and chose English. My Buggy was one of the first in the UK and the instruction books had not been printed but I was able to use all its features quite easily. Very user-friendly as they say.

Music is entered from a piano-style keyboard and the program supports a variety of these. Siel's mini clip-on keyboard, similar to Commodore's mini keyboard, is supplied with the Buggy and you can use either of these, Siel's full-size, CMK 49, keyboard or a similar plug-in keyboard.

Having chosen your language and keyboard you can opt for a Demo or become instantly creative and go to the Main Menu which displays five options. End of job, MIDI functions, Play, Disc Operations and Song Menu.

The Song Menu shows which songs are in memory and nine jolly tunes are already there ranging from swing and big band tunes to disco and latin american numbers.

The SONG-EDIT screen, which is the main display, is entered when you select a song or the Play option. It is divided into five sections. The top line lists the song number and name and underneath are four windows which display the following information: the solo sound parameters, the selected accompaniment pattern, the rhythm name, number and tempo, and the sequencer section showing what you are playing and recording.

Instruments are constructed from organ-like footage settings. 16', 8', 4' and 2', which range in amplitude from 0 to 31. Envelope (ADSR — Attack Decay, Sustain, Release) parameters can be varied through eight settings. 14 solo sounds are included for you but can be altered (organ, accordion, vibes, piano, cello, etc.) 28 can be stored in total.

The accompaniment section controls the accompaniment — honest. Vibrato, transpose and arpeggio are self explanatory (aren't they?). Melody sounds a full chord with each melody note. Teach lets you form your own chords and o.f.c. allows you to play one finger chords from the lower half of the QWERTY keyboard. The bass and chord parts are recorded together at this point but they can be individually selected for output. Rhythm plays the bass and chord parts in a rhythmic manner to compliment the rhythm section.

You can store up to 24 rhythms in the rhythm section and 14 examples are already programmed including disco, fonky, samba, tango, march and swing beats. Patterns are constructed from five realistic drums sounds — bass, snare, rim shot and two cymbals — and are programmed across a matrix of dots which are turned on or off by pressing a key. The fact that the patterns can be seen as well as heard makes it very easy to invent new rhythms. This is great fun and recommended to all would-be drummers everywhere.

The final window, the sequencer, is used to select the parts you want to play and record, the solo part or the accompaniment. From here the composition can be made to loop continuously.

The final menu, the MIDI menu, provides a stepping stone to the big world of interfacing. To use this you also need a MIDI interface, such as Siel's at £99, and a keyboard with MIDI sockets which, once plugged in, can also be used to control the Buggy. The music sections of the Buggy can be assigned to different channel and program numbers so the compositions will play through four separate MIDI keyboards. The effect is absolutely terrific. For the not-so-rich among us, a single keyboard will play back all one one voice which is still terrific and a multi-timbral instrument such as Casio's CZ-100 or CZ-1000 will play each part with a different voice — even more terrific.

The Sound Buggy is fun, easy to use and it sounds good. If you want more than SID can offer, take the Sound Buggy for a test drive.

Price: £99

Publisher: Siel (UK) Ltd

Address: Ahed Depot, Reigate Rd, Hookwood, Horley, Surrey RH6 0AY

C64

LETTERS

FOR EVERY LETTER PRINTED A PRIZE

Thanx Tronix

I should like to thank both you and Mastertronic for allowing me — and many other readers — to join the Mastertronic User Club.

The club magazine is second only to HCW, and was very well put together, unlike the magazines of other computer clubs which charge far more for membership.

I received the excellent game [illegible] Patrol for my [illegible] and have really [illegible] playing it — and the [illegible] has to be the [illegible] I have ever heard.

[illegible] given free [illegible] high-tech pen. It took [illegible] a while to figure [illegible] how to use it and it has [illegible] baffled. For those of you who haven't seen one, the Mastertronic pen has a cap that is not meant to be pulled off, but instead flicked to the other end on a "hinge" and is thereby used to add additional length to the pen.

Trouble is, without knowing that, you end up pulling it to pieces to find out how it works! Or at least I did, so I must have a zero rated IQ!

Andy Clarke, Atherstone

Let the games begin!

For a long time I have had to be content with buying HCW to keep abreast with what is happening in the computer world, but being unemployed I could not afford a computer.

Thanks for brightening up the long weeks. Now I have a C64 and can be frustrated, elated, confused or delighted according to what current program I am attempting. I'm 47 years old but enjoy blasting aliens much to the surprise of the whizz-kids in the local store.

My favourite is Drop-Zone. I have learnt to try before I buy games to avoid being ripped off.

Finally in the value for money stakes HCW is tops. When it POKEs through the letter box I can't wait to get a PEEK.

R George, Huddersfield

Glad to have you aboard the addicts bandwagon. Let's hope you can get full value from your back issues now!

Easing the load

Loading difficulties with cassette programs may sometimes be caused by non-use of a cassette over a fairly long period. This can cause a pick-up from one layer of tape to the next, known as "print-through" in audio recording jargon, through magnetic transfer.

It is advisable to run all tapes from end to end and back again from time to time on fast forward/rewind and you may find some problems disappear.

R M Johnston, London SE5

Load In-
Save £5
Now!

Use this Ferguson to load in programmes.
Use it to help you create programmes.
Use it to save programmes. And use it to save money — at Rumbelows it's reduced from £24.99 to £19.99!

FREE! Buy the Sinclair Spectrum Plus at £119.99 and get this recorder free. Hurry while stocks last

THIS
FERGUSON COMPUTER
DEDICATED CASSETTE RECORDER
ONLY £19.99
MODEL 3T31

Trust RUMBELOWS

RON COMPLEX RON COMPLEX RON COMPLEX

Private Investigator

Ron Complex, the outsider, finds himself inside in this inside-out episode of our serial that makes eternity seem like a coffee-break

Ron stood in the dock of an enormous court room waiting for the engineers to finish repairing the judge

Ron had never seen the insides of a judge before but he was getting a good view of the wheels of justice as the engineers hastily reassembled Judge Z, a Mark IV Ghia Robot Judge The technicians had been called in after Judge Z sentenced a man to 2000 years hard labour for sneezing in a public place

The last screw was fitted and the two overalled men stood back and looked at the motionless metal figure

'Something's wrong he doesn't look right ' said one 'I know what it is we forgot to put his wig back on ' said the other

Quickly they glued down the wig on the judge's gleaming dome and waited

'He's taking a long time to warm up ' 'Yes I think we'll have to apply the rapid ignition strategy ' Both men gave the judge a sharp tap on the side of the head and the robot's eyes lit up

'Lovely job Let's go we've got a robot traffic warden to repair before lunchtime '

The technicians rushed out of the courtroom, leaving the judge whirring and humming as he perused the brief for Ron's case with his telephoto lens eyes

'This court is now in session,' droned the droid judge ' Ron Complex you stand accused of breaking into the Amalgamated Consolidated Building and rummaging around in someone else's filing cabinets How do you plead?'

'Listen metalhead,' snapped Ron 'I'm not going to be tried by some heap of junk Find me a flesh and blood judge Until then I stay silent'

'Contempt of court You are hereby sentenced to five years in a maximum security prison on a diet of wholemeal bread and Perrier water Case dismissed "

As Ron was being bundled out of court he saw the judge pick up a phone 'I just thought you would like to know that I have done what is required I look forward to receiving the Murkotronic sideways ROM add on for Robo-Judges that will triple my memory capacity "

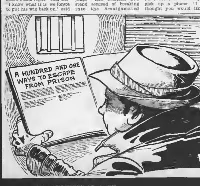
'Murko doesn't leave anything to chance' thought Ron, ' he's even got the judge in his pocket It's amazing what a machine will do when bribed with a peripheral

Ron heard the cell door slam behind him 'Luckily I brought something to read with me ' thought Ron as he pulled pages from inside his trilby Within a few moments he was scanning A Hundred and One Ways to Escape from Prison by R J Moffat

'No 1 This is an oldie but goldie that has been tried with success on many occasions Step 1 lie on your bed and writhe in agony Step 2 shout to the guard that you are in pain Step 3 overpower the guard and make good your escape Simple, eh? Don't listen to all that talk about tunnels, try this method today to avoid disappointment '

'Okay let's give it a shot thought Ron settling down for a writhe Moments later Ron heard a knock on the door Without thinking he got up to answer it

'You are sussed sonny boy," said a voice from the other side of the door A hatch flew open and Ron saw a shadowy face 'We weren't born yesterday you know' The guard held up a book on the cover were the words 'One Hundred and One Ways of Thwarting Escape Bids by R J Moffat '


A HUNDRED AND ONE WAYS TO ESCAPE FROM PRISON
W.

Next week: The Hundred and second way

HOME COMPUTING WEEKLY CLASSIFIED

Lineage
35p per word

Semi display: £7.10 per single column centimetre
Ring for information on series bookings discounts.

All advertisements in this section must be prepaid
Advertisements are accepted subject to the terms and
conditions printed on the advertisement rate card (available on request)

01-437 0699
EXT 322.
Send your requirements to:
David Horne
ASP LTD.
1 Golden Square,
London W1R 3AB

Accessories

MAPMAKER
Simply the best way of making adventure maps. Write on/wipe off
A3 size 420 x 297mm
White PVC screen printed with a blue grid of 11 x 13 boxes
Price includes special pen
Send ch/PO for £4.48 to
MAPIT, 166 ROBERT ST,
Ynysybwl, Mid-Glamorgan,
CF37 3E

Clubs

AMSTRAD/ATMOS/ORIC 1 CLUB Large selection of software available. Send SAE to 26 Beechley Drive Cardiff

Duplication

jbs records
COMPUTER PROGRAMS
REAL-TIME or (Slow) HIGH-SPEED Professional Cassette Duplication and Blanks 1 - 1000+. Computer printed Cassette Labels. BBC Disk Duplication and Unformatted Disks 1 - 800+. Fast security delivery service
jbs records — a division of FILTERBOND LTD, 19 Sadlers Way, Hertford SG14 2DZ 0992-551188

CASSETTE DUPLICATION
A high quality service for small software houses. 20-1000 copies in real time onto Chrome with care
Ring Beconsfield (04946) 5900
SOUNDS GOOD

For Hire

Hire & Exchange Software
Exchange your software! Phone or send list of your software and ask for details. Software hire! No membership charge. P&P free. Hire tapes from £1.50. Phone for details
T & P Software, 4 Maine Road, Newland, Drax, Selby, North Yorks.
Tel 0757 618007

To hire a computer and/or peripherals by the week or month, please ring 01-607 0157 or 01-997 6457. We specialise in BBC and Apricot computers. Computer Hire Services 294a Caledonian Road, London N1 1BA

ORIC, ATMOS, COMMODORE 64, LYNX SOFTWARE LIBRARY
Over 150 Oric and 200 Commodore 64 titles.
Stamp for details -
Les Wilson 100 Blenheim Walk Corby Northants

CLASSIFIED ADVERTISING TERMS & CONDITIONS
Our terms for new advertisers (semi-display and lineage) are strictly pro-forma payments until satisfactory reference can be taken up (excluding recognised advertising agencies). Cheques and PO's should be crossed and made payable to
ARGUS SPECIALIST PUBLICATIONS LTD.,
and send together with the advertisement to
THE CLASSIFIED DEPT L/H, NO. 1 GOLDEN SQUARE, LONDON, W1R 3AB
There are no reimbursements for cancellations. Advertisements arriving too late for a particular issue will be inserted in the following issue unless accompanied by instructions to the contrary.
All advertising sales are subject to Government regulations concerning VAT. Advertisers are responsible for complying with the various legal requirements in force eg: The Trade Description Act, Sex Discrimination Act & The Business Advertisements (Disclosure) Order 1977.
FULL TERMS & CONDITIONS OF ADVERTISING AVAILABLE ON REQUEST

Libraries

BBC B/Electron/Dragon software library — Membership £5.00 — Tapes 1 (+30p P&P). Stamp for details. E. Tucker, (H) 58, Blenheim Walk, Corby, Northants

PENPAL SERVICE. Make new friends, swap programs and ideas. All machines. Nationwide. Free membership. Send SAE to C Maarof, 33 Woodlands Road, Crumpsall, Manchester, M8 7LF

Software

HOME ACCOUNTS. Put your house in order! Comprehensive coverage of bank accounts, credit cards, HP etc. Inbuilt accuracy check. Projects cash flow for any period. Available for all Commodores, BBC, Spectrum and Amstrad £8.45. Full details from Discus Software, Freepost, Beach Approach, Brixham TQ5 8BR

AMSTRAD LOWEST PRICES anywhere'? On discs, software etc. List from Blackburn Micro Systems, 53 Durham Road, Blackburn, Lancs BB1 9NH

THE CHART PROGRAM (BBC B) more details from J HUGHES 42 CYPRUS ST' BETHNAL GREEN LONDON E2 ONN.

TI-99/4A Software

TEXAS 99/4A
Imported
Superior Quality

CHESS*	£9.95
5-GAME VALUEPACK	£5.95
GHOSTHUNTERS*	£9.95
MR ROBOT	£5.95
PIRATE RACING*	£5.95
SPECIAL OFFER	
SPOOK MAN	only £2.95

* = requires Extended Basic
P&P included. Overseas add £1
Send cheque/PO to
CINTRONICS LTD, Lowrie House
1, 2 & 3 Princes Lane
London N10 3LU
For a full list of our titles send SAE

Repairs 'n' Spares Register

CHILTERN COMPUTER CENTRE
Fast reliable service
Spectrum £18 incl
We also repair BBC, Commodore, Oric, Dragon disc drives and printers
Ring 0582 455684 for details
Send computer with details incl cheque to
Newcrown Computers Ltd (HCW)
76B Dallow Road
Luton Beds

COMPUTER REPAIRS IN SOUTHEND

Spectrum/Plus	£19.95
Spectrum K/B faults	£12.95
Interface 1/2	£14.95
New Spectrum power supply	£9.95
C64/Vic 20	from £12.95

Above prices include parts, post & packing
All repairs are guaranteed 3 months
Call in or phone for more details
MINNIE MICRO ELECTRONICS
12 EASTERN ESPLANADE
SOUTHEND, ESSEX
Tel (0702) 62033/615809
OPEN 7 DAYS A WEEK

COMPUTER REPAIRS
We are the experts, having serviced Sinclair computers since the introduction of the ZX80!
Don't waste money on estimates — we repair Sinclair computers at price quoted inclusive parts, labour, postage, VAT, irrespective of fault. No hidden charges
Repairs guaranteed for 3 months.

Spectrum	£16.75 inc parts
ZX81	£11.50 inc parts
16K RAM	£9.95 inc parts
Microdrive	£15.95 inc parts
Interface I, II	£18.75 inc parts
also	
BBC	£22.00 + parts
Electron	£19.95 + parts
ZX Spectrum Expansion Kit	£15.95

Computer Retailers please phone for Special Trade Rates.
Call or Write with cheque or P.O.
T.V. Services of Cambridge Ltd.
French's Road, Cambridge CB4 3NP
Tel (0223) 311371

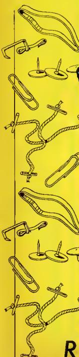
COMMODORE REPAIRS
Commodore repairs by Commodore approved engineers. Repair prices VIC 20 modulator £8.00 VIC 20 £15, CBM 64 from £20 C2N from £9.00 1541 from £20 C64 PSU £13.20 Spectrum £16.20 Dragon £32 Electron, Atari.
For more information SAE or telephone
G C Bunce & Son 36 Burlington Road
Burnham Bucks SL1 7BQ
Tel (06286) 61696

Computer Repairs in Hampshire
Spectrum £19.95 inc VAT p&p
BBC CBM 64 from £19.95
Also Atari and VIC 20
COMPUTER CARE SOUTH
149 KINGSTON ROAD,
PORTSMOUTH,
HAMPSHIRE
Tel. 0705 825110

CLASSIFIED RING 01-437 0699

The contents of this publication, including all articles, plans, drawings and programs and all copyright and all other intellectual property rights therein belong to Argus Specialist Publications Ltd. All rights conferred by the Law of Copyright and other intellectual property rights and by virtue of international copyright conventions are specifically reserved to Argus Specialist Publications Ltd and any reproduction requires the prior written consent of the company.
© 1985 Argus Specialist Publications Ltd

SSN0264-4991



Bruno Beater

Martin Smith of Airdrie has discovered how to amass points the easy way in Frank Bruno's Boxing. "I have found a useful code to put in when you load another boxer. Press (L), you then type in AFC. Then press enter and enter the code IC4IMOAMS. Press enter twice and you should start the game with 42,040 points."

Readers Hi-Scores

Name	Game	Machine	Score
Mark Price	Pole Position	TI 99/4A	109,450
	Parsec	TI 99/4A	582,800
	Tombstone City	TI 99/4A	140,850
	Munchman	TI 99/4A	82,320
Phillip Lock	Automania	Spectrum	12,000
	Decathlon	Spectrum	147,000
	Quasimodo	Vic 20	2,000,000
L. Thornton	Moon Cresta	Spectrum	31,230
	Decathlon	Spectrum	450,420
Robert Mears	Hypersports	Spectrum	322,546

Reader Review

Return to Pirates Isle

I have about ten cartridges and lots of cassettes but I can definitely say this game is the best! The graphics are absolutely brilliant They must have taken ages to design To start with you see a blurred picture because you haven't got your glasses The instruction book helps you find them The adventure itself is like the other Scott Adams Adventures — very challenging

This one is a bit harder than the others and not advisable for the beginner This adventure is the sequel to Pirate adventure and you have to collect thirteen treasures and then store them I've found my first treasure but some of the replies are a little stroppy and not as detailed as the other Scott Adams adventures This is because the majority of the memory has been used on the graphics There is a 'save game' and a printer facility as well and to sum up it is a really excellent cartridge worth every penny If you love adventures you will love this

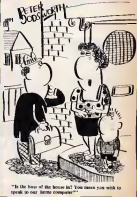
Dean Moxon, Castleford

Price: £14 95

Publisher: Parco Electrics

Address: 2 Devonshire Court, Heath Park, Honiton, Devon

TI99



"Is the boss of the house in? You mean you wish to speak to our home computer?"

Solution to last week's puzzle

[illegible] miles The distance to each [illegible] is simply the number of [illegible] in the name multiplied [illegible] number of consonants [illegible] iff has 2 vowels and [illegible] consonants and 2x5 = 10

Booty Beater

Mark Halton of Bristol writes to say that the cheat mode on Booty for the C64 can be triggered by typing 'K''E''V''I''N'

READERS PAGE

shadow of the
UNICORN

THE FIRST EVER MIKRO-PLUS GAME

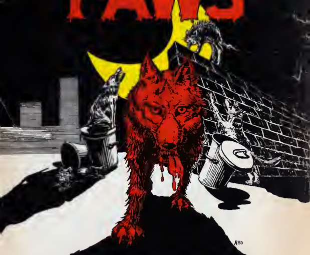
Nearly 50% bigger and better game for the Spectrum

Shadow of the Unicorn – a 120 page illustrated book, 64K of programme, and Mikro-Plus interface – all for £14.95

- Built-in joystick port
- Back-up facility to Microdrive
- Back-up facility to Tape
- Tape alignment routine for trouble free loading

Just When You Thought It Was Safe To Walk The Streets...

PAWS



HAVE YOU ENOUGH CATOPLEXIC ENERGY?
WILL YOUR STRENGTH AND STAMINA LAST OUT?
YOU MUST STOP THE DOGS DESTROYING YOUR HOME!

LOOK WHAT THE MAGAZINES SAY ABOUT THIS ARCADE ADVENTURE:

Home Computing Weekly: "I love this........don't miss this one"

GRAPHICS:

Sinclair User: "Well designed and attractive"
H.C.W: "The best I've seen.....in multi-colour"

SPECTRUM	**£6.95**
AMSTRAD	**£7.95**

Available from most good computer outlets.

artic Computing Ltd.

PLAY IT !
DEFEAT IT !

Order direct from:
Artic Computing Ltd.
Main St. Brandesburton
DRIFFIELD YO25 8RL
Tel: 0401-43553

Access

BARCLAYCARD